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Volume 46, 1919

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THE KEYSTONE OF
NATIONAL PROSPERITY
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N. J. Agr.

Farmers' Week at Penna. State College

First Summer Meeting Draws Large Crowds and Gives Universal Satisfaction

FRED S. HULTZ

With the sun shining brightly upon some 5,000 happy visitors, the first Annual Summer Farmer's Week opened at State College, June 17, with all of the suppressed excitement that only such an occasion can create. It is no new thing for a group of 5,000 people to gather for a single activity, but it is a new thing in Pennsylvania for a vast gathering of this sort of earnest, intelligent, country people to come together not to be amused, but for the purpose of studying farming. In his address of welcome Tuesday evening, Dean Watts thru wide the doors of the School of Agriculture to these many guests, turned over to their inspection the entire equipment of college and experiment station and bid them help themselves.

Livestock Demonstrations

It has been known that the interest in live stock in Pennsylvania has been increasing by leaps and bounds, but such close attention as was given to the lectures, demonstrations and meetings relating to this subject, was surprising even to those in closest touch with animal husbandry in the state.

Boys' Judging Contest at Pennsylvania Farmers' Week

Down at Spring Creek Farm, one of the many operated by the college, hundreds of eager listeners saw how hogs can be produced most economically. Here the young porkers soon learn to utilize green forage crops and are grown out with a considerable saving as to grain and protein supplement. Their mothers are wintered over on small amounts of grain and tankage, supplemented with all the alfalfa hay they can consume, and this too is a profitable operation. The best type boars of different breeds were on exhibition, showing what one would expect to find in the way of a breeding sire of the finest kind.

Specialists from each department in the School of Agriculture, men who have made a life time study f the various phases of the work. lectured and answered questions pertaining to the discussions. We learned that it pays to dock lambs and that they should be both docked and castrated at an early age. We saw the fleeces being removed from sheep by the latest type of power clippers and were told that shearing not too late in the spring meant additional comfort for the sheep, thereby effecting more economical maintenance. Dipping the sheep after the spring shearing frees them from ticks and lice, allows them to spend the summer on pasture in comfort and in producing gains instead of in fighting parasites.

Farmers' Week Visitors Studying Selection of Right Type of Laying Hen

Professor Tomhave stated in his talk that. "Cattle feeding has never assumed its rightful place in the live stock business in all sections of Pennsylvania. Because it has at times become somewhat of a gamble as to the profits realized, a great many steer feeders have become discouraged and quit when success was actually in sight. Results of the steer feeding experiments at the college have shown that by the use of plenty of corn silage properly supplemented with cottonseed meal, grains, and leguminous hays, a profit can be made and should be taken advantage of by our farmers." During the past eight years records of the complete cost of maintaining beef breeding cows have been kept by the department of Animal Husbandry, and the results have shown that calves can be produced, grown, fed and marketed profitably. We not only heard about this but we actually saw many of the animals referred to in the discussion of the experiments. Thus we were enabled to form ideas that would have been impossible from simply reading bulletins summarizing the studies.

The Boys Take Part

Wednesday afternoon found 55 eager future citizens, representing eleven different counties, assembled for the Boy's Stock Judging Contest. This proved to be a great interest event. Not only did keen rivalry exist between the representative teams, but each youngster seemed to appreciate that this was to be a test of his own individual ability as a stockman, and for at least once during the big week these boys wore a serious expression. Susquehanna County won first honors, scoring 1,692 points out of a possible [illegible] for the five classes. Cambria County was second, Tioga third, Blair fourth and Centre County fifth. The classes consisted of horses, dairy cattle, beef cattle, sheep and swine. Orrie Cummings, of Tioga County, won individual honors for having used the best judgement in placing the animals in their proper order. Too much emphasis cannot be laid upon the value of such contests to the future live stock interests of Pennsylvania.

A team of three boys from the Stormstown Purebred Pig Club staged a demonstration on the fitting of pigs for the show ring. Over a thousand pig club members in the state will be showing their pigs this fall in local contests and at county fairs. Often the real merit of these animals is not appreciated because t[illegible] are not fitted up [illegible] animals of [illegible] exhibitors. The object of this demonstration was to show how it is possible for club members themselves to prepare their animals so as to make a favorable impression in the show ring.

Agronomy Exhibits Attract

Over on the Old Fertilizer Plots the results of 35 years of continual experimentation were explained. Men could be seen noting down the facts pertinent to their own locality, separating practical points from those more scientific and storing them away for use upon the return home. This was something more than a mere gala day. This was a business proposition of the kind that makes business a pleasure. Likewise the corn variety plots, the small grains, and the experiments with garden and truck crops were a source of continual and widespread interest. The discussions on dusting versus spraying for the control of apple scab were instructive.

Like Ringling Brothers

The tractor demonstration proved to be a regular three ringed circus. Whether it was the noise these snorting "tanks" made or whether it was the publicity they have received during the past year or two, no one can tell, but the tractor talks were certainly well attended. Many of the tractor manufacturers sent representatives from the factory to assist in pointing out the advantages of the use of this type of power for farm work. In contra-comparison over in the next field we saw a six-horse team pulling a three-bottom plow thru the rich Centre County soil. Secretary Dinsmore of the Percheron Society of America was unable, at the last moment, to be present and the demonstration was ably conducted by the superintendant of the college farms. Different hitches were used, showing the use of four and six-horse teams, while the advantages of each hitch were pointed out and discussed. The horse as a means of locomotion for farm machinery is still enjoying warranted popularity. There is room for both horse and tractor in farming operations. Neither one will ever entirely supplant the other, and each has its ardent supporters. Time alone will divulge which type of power is the more economical on smaller and larger farms.

Watching the Six-Horse Team and Tractor Plowing Demonstrations

Women in Evidence

Let it not be thought that we men farmers alone were present. Mrs. Farmer came along too, and at special conferences she studied such things as how to plan meals, how to feed children and the use and value of milk as a food. Instead of being the maid of all work, the farmer's wife is finding out that she also can have conveniences, short cuts and pretty things. Down at the Woman's Building we found exhibits showing attractive arrangements for books, pictures and draperies. Every capable wife knows the big things, but all of us appreciate that it is the small details which count for the most in making a homey atmosphere. The right shade of curtains and wall tints, the proper harmony between furniture, rugs and hangings. These are what make home a Place Beautiful.

We are marketing our wool at high prices. This is brought home to us when we have to purchase new clothing, and we find too that cotton is just as prohibitive in prices. In showing garments for Farmer's Week an effort was made to display those that, with a little thought and care, could be made by any woman who has only a slight training in garment construction. For a number of years before the war there was a tendency to substitute the ready-made under-garments, but war expenses have taught us that the home-made undergarment with its simple trimming gives much more satisfactory wear.

They Were Hungry

A special caterer was imported to meet the emergency demands of this enormous, hungry crowd of visitors. Altho every available eating house in the village was listed, it soon became evident that some special arrangement must be made and the plan finally evolved was to serve box lunches, all uniform, from tents scattered about the campus and farms. Any one who has seen a mess line of hungry doughboys can appreciate what a mess line of hungry farmers must be like. And it was all of that, and then some. The sandwiches, pickles, eggs, cake and

(Continued on Page 16.)

Spades and Clubs in N. Y. Agriculture

Lessons Drawn From Travels Over the State and Visits to Farms---John H. Voorhees

For two months or more I have being riding trollies, auto busses, and farm bureau cars around New York State. It is my thought that a few of my observations and impressions may be of interest to farmers who are tied close to the plow handles at this time of year, June 10.

The Potato Crop

The first week in April I spent several days on Long Island planting some potato mosaic tests. The farm bureau agent of Suffolk County had collected from different sources, including Upper New York, Vermont, Maine and Canada, some 72 lots of seed potatoes which were divided into three lots and planted side by side on three farms. It will be interesting to note the manifestation of diseases in these strains of potatoes, and the effect upon yields. The cleanest, nicest looking and best graded lots were from Canada, and one judging the seeds by appearance would naturally say that we have a few things to learn from our brothers across the line. On each farm the owner glanced over the different lots of seed and his eyes came to rest on the Canadian stocks, and they asked "where did those seed come from, they look good."

Now, two months later, I have just returned from planting potatoes in Steuben, Washington and Franklin Counties, where seed is raised for Long Island, New Jersey and Cuba growers. In these counties all forms of machinery are in use from jabbers to platform planters, and all conceivable methods of planting from dropping up, are used. On Long Island, where table stock only is raised, very few farmers treated their seed and the prevailing rate of planting is 10 bushels to the acre. On the other hand, northern growers generally treat their seed and use anywhere from 12 to 18 bushels to the acre. Methods of fertilization vary often from farm to farm, and distinctly from section to section. Various amounts of fertilizer of varying analyses are used and in the same manner the methods of cultivation vary greatly.

There should be one most profitable practice in each case, whether it is planting, fertilization cultivation—at least so for any given section. e is no question of this and methods are being unified, but the process is very slow. So far as seed production is concerned, the problems now center largely around the elimination of diseases, improvement of stock by hill selection, grading and centralized methods of storage and seed treatment. The present indications appear to be toward central or community storage seed treatment houses. There is no question in my opinion but that southern growers will before very long demand seed grown from selected stock which has been properly stored, treated against diseases, and graded. Of course, it would be a progressive step for northern growers to proceed to develop such stock, but demand from the southern growers is needed to stimulate it.

Oats Planted Late

The prospects for oats this year are not first class. The heavy rains in April and May delayed planting. I would estimate that fully 50 percent of the crop was planted after May 15; fully two weeks late. They will undoubtedly be light this year and another year farmers who have only late-planted oats will do well to buy seed from someone in the neighborhood who was fortunate enough to plant early.

Many farmers sow seven pecks of oats, three pecks of barley, and one peck of Canada field peas for forage, hay or grain. Such a mixture is well adapted to grain purposes because the resulting seed mixture is excellent for feeding purposes. On the other hand, when these crops are sown for hay or forage, or in a season similar to the present spring, equal parts of each would undoubtedly prove more satisfactory.

Lime Oats For Clover

The amount of lime being used is increasing. It decreased last year but farmers everywhere, except on lime stone soils, are learning that they must use it if a successful clover crop is to be grown. Farm Bureau agents make the remark that 30 or 50 or 100 cars have been sold in their particular counties this spring, and some make the assertion that it is their ambition to increase the use of lime to a car on every farm every five years. That's a mighty good ambition. Probably nothing will increase farm profits and build up fertility any quicker than lime, but lime is an every year practice, not a five-year proposition. It should be made a part of the farm business to use lime systematically every year. Demonstrations and experiments show very clearly that the logical place of application is prior to seeding clover which is generally done with oats, wheat or rye.

Substitutes For the Oats Ground

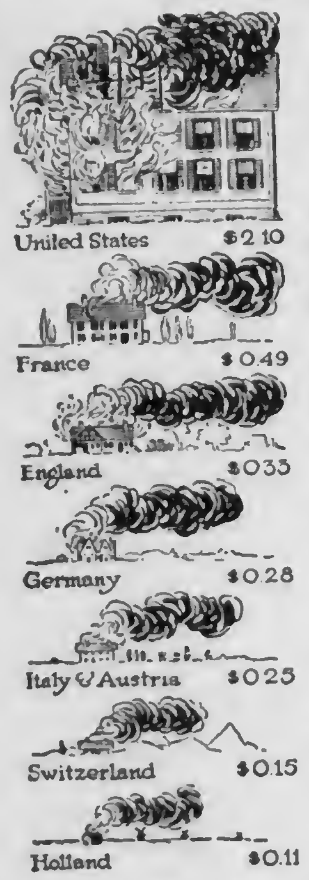
My observations have proved to me that many farmers did not attempt to plant oats at all this year. Some are planning to utilize the ground with corn, others with buckwheat, and still others with beans. Beans do not appeal to me as a practical substitute for oats or anything else in New York. For a time at least we must acknowledge defeat. Diseases and low prices have sounded death's knell to the New York bean industry unless some unexpected disease remedy, disease resistant variety, or radical change in the market is developed. Corn will undoubtedly prove satisfactory where it may be matured. If it is to be grown for husking, care should be used in the selection of a variety. Probably the flints are more season proof when the source is unknown than the dents.

I have talked with a number of farmers who are planning to use buckwheat and mix rye and winter vetch with it. They sow a combination of a bushel of rye, 10 pounds of winter vetch and two or three pecks of Japanese buckwheat. This is an entirely new practice to me, but the farmers who are trying it out tell me that it is very satisfactory. The buckwheat is harvested in the usual manner. It is claimed that the rye and vetch make little or no trouble if the reaper bar is raised a little and they come on for a crop of grain the following year; or, if preferred, they may be plowed under to increase the organic matter of the soil. This looks like a good proposition and is worth a trial. I hope I may be able to make a more detailed report later in the season and again next year, when the rye and vetch are in full growth, or after their harvest.

(Continued on Page 6.)

Current Comment

By Father Penn



Annual Fire Loss per Capita in 8 Countries

THE illustration appearing herewith shows the comparative fire loss annually per capita in eight countries. It will be seen that this loss varies from 11 cents to $2.10 per person, and that the greatest loss occurs in the United States. In other words, if the annual fire loss in each country were made up by a tax, every man woman and child in this country would have to pay $2.10 while the people of Holland would pay only 11 cents each. From this it would seem that the people of the United States are about twenty times as careless as the people of Holland. If our annual fire loss could be prevented the amount would pay the interest on $4,500,000,000.

The National Board of Fire Underwriters finds that "the largest single causes of fires last year were the careless handling of cigars, cigarettes and smoking pipes, and children playing with matches." A large number of the farm fires are due to overturned lanterns and lamps. A geat proportion of these fires could be prevented by care in using and placing the lights, and a majority could be stopped before serious damage was done if some means of extinguishing small fires were at hand. If it is good business for factories and railroad companies to keep buckets and tubs of water setting about within easy access and hand fire extinguishers hanging at opportune places, surely farmers might well imitate the example and in this way prevent many a little blaze from becoming a disastrous conflagration.

That farmers realize the danger of fire is shown by the fact that there are nearly 2,000 farmers' mutual fire insurance companies in the United States with a total of six billion dollars of insurance now in force. However, it is safe to say that these policies represent not more than two-thirds of pre-war valuations and do not warrant any carelessness with fire nor any neglect to provide preventive measures.

Wild Mustard

A reader signing himself F. B., Wayne County, Pa., asks how to kill wild mustard.

No weed has developed faster on eastern farms than has wild mustard, as a ride thru the country in any direction will bear witness. Many grass and oat fields are literally yellow with this pest. This weed is immensely productve—as many as 15,000 seeds have been counted from a single plant. One characteristic which makes it difficult to eradicate is the longevity of the seeds. They will lie dormant in the soil for several years if deeply covered. Another peculiarity is that it will begin to ripen seeds on the bottom branches while continuing to grow and bloom at the top. Since it is propagated by seed, the obvious remedy is to prevent the plant from going to seed. Where it is growing in grass fields, the grass should be mowed as early as possible. When oat fields are infested there is nothing to do except to try to keep the seed from getting into the threshed grain and straw and hence into the manure. A carefully adjusted separator should take out most of the seed. Fields infested should be planted to hoed crops a few years so that the plants may be killed as they appear.

The writer also asks how to keep a hayfork rope from twisting. One of the best ways is to tie the end of the rope to one of two links or rings which are connected by a swivel, and attach the single-tree to the other.

Harvesting Crops

As it is now time for harvesting many of the clover crops, every farmer should know that it is entirely practicable to plow clover sod over and sow it to cow peas. Some claim the cow peas are preferable to soy beans and they will stand considerable drouth if well tilled. They do not require the drainage and lime that soy beans do, and therefore find wider adaptation for green manuring. When harvested for hay, cowpeas, should be cut when the first pods turn yellow; for seed, when half the pods are ripe. Cow pea hay compares favorably with clover hay in digestible nutrients, but is a little lower in protein. Like soybeans, cow peas are grown for grain, hay, silage, soiling and pasture. They are most useful for hogs to forage in. Both are harvested with the usual implements of the harvest field—the ordinary mowing machine and rake. They should always be raked when nicely wilted.

When clover has been seeded alone in the spring, a crop of hay may be cut in late summer. But if it has been seeded with a nurse crop, it is a wise plan to clip it after the cereal crop is removed and the clover has made a good growth. This insures a thicker stand and cleaner crop of clover for next year. If it is a season of frequent rains, it is well to clip it 2 or 3 weeks after the cereal is removed.

The farmers who have grown field peas and oats, will find them an excellent combination to feed green to dairy cows, and especially fine for forage crops. The two make a nutritious hay which compares favorably with clover hay in composition. These are at their best when cut for hay when the oats are in milk and the peas well podded. They should not be allowed to get riper than this, even if the peas must be cut a little green. They are cured like clover. Field peas can be seeded late for a fall growth, and especially if wanted for green manuring.

Where rye and hairy vetch, or timothy and vetch have been grown together for seed, it should be harvested when the lower pods of the vetch are ripe. Vetch does not ripen all at once, but more seed will be saved at this stage than later. Timothy can be seeded with wheat in the fall, and occupy the ground next year if the cereal does poorly. Fall seedings are generally preferable to spring seedings. The timothy can be seeded alone in July, August, or early September, and a fall crop of hay may be harvested the following season. When used for this, most farmers use 12 to 14 pounds of timothy for a full seeding, or 7 pounds is sufficient along with 7 pounds of red clover and 3 pounds of alsike clover. It is best to defer timothy harvesting until the blossoms have fallen, then rush it thru with all speed possible.

Alfalfa is richer in protein than clover, and is a plant highly relished by all classes of live stock. The time of harvesting it is uncertain, but generally the crop is cut for hay when about one-tenth of it is in bloom. It is better if alfalfa fields are not grazed the first year nor just after the hay is harvested. Care should be taken that it is never overstocked or the plants will die out. While it is the best of roughages for dairy cows and sheep, care should be used in feeding it to hogs, and for horses it should be fed but sparingly. But for all this, the plant is so valuable to dairymen that none can afford not to grow it.

Rape is especially valuable for furnishing green feed in autumn and early winter, thereby conserving the silage and hay for winter use. Nothing can excell it as a green forage for sheep and swine. Several small pasture fields seeded at different times will be found very desirable. It calls for a well prepared seed bed and may be seeded from April to the last of July. It produces seed only where it is able to withstand the winter. —Country Contributor.

Why Corporation Farming Fails

Corporation farming is a plausable theory. But in most instances it has not been a success in the Eastern states. Several company farming enterprises have been organized in New York State, but with the exception of one or two in the fruit belt, they have not met the expectations of their promoters.

The usual method followed in forming and operating farm corporations has been to capitalize four or five adjoining farms and their equipment as a basis for issuing stock. Each individual farm owner holds stock in the corporation to the extent of the appraised value of his farm, live stock and implements. Directors and officers are elected, and the business is conducted along the same general lines as that of other corporations.

One of the stock holders is selected to attend to the buying and selling, another to the practical farm management. Each stock holder has his own special part of the operations to look after, but all work together to secure the largest maximum returns. Each one receives a salary according to the number of days' work performed, and the profits at the end of the season are divided as dividends on the capital stock. The days' work is limited to a certain number of hours, and every member of the family that performs any of the farm work is paid by the hour.

This plan has worked out better on paper than in actual practice. In accordance with the prospectives, it secures greater efficiency in production. It enables the corporation to purchase and make use of better labor-saving machinery than the individual farmer could profitably use. It affords opportunity to secure high-priced purebred breeding stock, and offers a number of other advantages.

There are several reasons why the corporation plan has failed to give the returns that these advantages ought to yield. One of the most important is the unpaid labor that goes into the production of crops on the individually operated farms. The farmer, his wife and children all work, in many instances long hours, each day, to produce and harvest the crops, and take care of the live stock and dairy products. Much of this work is unaccounted for in figuring farm production costs, but in the aggregate it is so large a factor in farming that it outweighs all the advantages of corporation farming.

A few years ago some of the canning and preserving companies in Western New York leased many acres of land near their plants for the purpose of growing their own tomatoes, peas and other canning products. But notwithstanding the fact that they hired foreign men, women and children to do the work they could not compete with this unpaid farm labor, and in abandoning this project they willingly admitted that they could buy canning products from the farmers at less cost than they could grow them.

Unless the prices of food products are high enough to cover the cost of production based on the factory day and wage scale, and a fair rate of interest on the investment, corporation farming will remain a beautiful theory, fair to look upon, but not to be taken seriously, at least to the extent of investing good money in farm corporation stock selling schemes.— E. E. R.

HOW WE SELECT SEED CORN

I have read and heard so much about the selection and testing of seed corn that I have often marveled that not a single person has thought of using quite the same method that we are using and have been using for three generations. Yet it is very simple, very efficient and one hundred percent satisfactory in results. We have thought it necessary only twice to test our corn thoroly. 1918 was one of the years; the other was 1907. Both tests were almost perfect.

Here then, is the answer: While husking the corn, constantly watch for the most perfect ear. If, after the husks have ben stripped of an ear on one side, and it looks good and, after examining its stalk and it also meets your approval, break it off together with all the husks that will cling to it and throw it on the pile to the rest. This marks the ear and upon unloading the wagon all "seed" ears are thrown upon the upper floor of our corn shed. Here, hanging from strong wies, are a long thin hickory pole and a lead pipe. As soon as possible or the first rainy day, take two ears, tie the tips of the husks together, and hang them over the pole or pipe and there you are. It will soon be dry, cannot freeze and the mice cannot get at it.

Next spring take all the "seed" ears out into the sunlight, very carefully examine and reexamine each ear, shell by hand and there is about two bushels of "seed" corn which is the pick of 1,500 or 2,000 bushels as the case may be of as nearly perfect corn as man can find. It is ready to plant. Other people may test their corn and they should [illegible] they rave about it and it is good [illegible] after almost a century of experience [illegible] with [illegible] H. L. Walsh [illegible]

PENNSYLVANIA FARMER
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VOLUME 46 NUMBER 1

Our job is to serve our readers. Whenever and wherever we can help you, write us.—The Editors.

Wheat Damage

LATE reports from many sections of the East indicate that the wheat yield will fall far below the predicted harvest. Smut, rust, fly and other damaging factors are reported as having injured the crop from 10 to as high as 60 to 80 percent. Sections of Maryland report that late damage will cut the crop to as low as six to eight bushels per acre. We shall be glad to have reports from readers on wheat condition in their communities. Post card or letter reports will be of value to all readers.

Cooperative Law

THE Jordan bill providing for incorporation and regulation of cooperative agricultural, dairy and horticultural associations has become a law in this state. Under this law the powers of farmers, defined as "persons engaged in agriculture, dairying livestock raising, poultry raising, bee-keeping and horticulture" in collective buying, selling, hiring and transportation are definitely prescribed. A cooperative association organized as prescribed in the law is authorized to act as agent for its members and perform services connected with "the production, preservation, drying, canning, storing, handling, utilization, marketing or sale" of farm products produced by its members, and may perform services connected with "purchase or hiring" of "supplies including live stock, machinery, and equipment," and may hire labor. This law defines the legal status of farm organizations in this state and will provide the basis for wise development of the organization movement wherever farmers want to make use of it.

Serious Wheat Disease

NUMEROUS reports have come to us telling of serious damage to the wheat crop in some sections of the east by what is termed rust. This disease has never been serious in the east heretofore and many farmers are much alarmed in the localities where it has made its appearance. Some reports estimate a reduction in yield of from 25 to 75 percent. This disease probably reduces the yield in the United States thirty to fifty million bushels annually. It occurs on the stems and leaf sheaths and to some extent on the leaves, causing spots which finally become black. The first stage is commonly called "red rust," and the second stage "black rust," yet it is one and the same disease.

It is claimed that the common barberry is the host upon which the spores develop and that the destruction of this host plant eliminates the disease. It appears on the leaves of the barberry bush as circular, orange colored spots—usually on the underside of the leaf. No treatment of the seed or field, so far as is yet known, has any effect as a control measure. Some authorities go so far as to say that the elimination of the barberry is the only way by which the disease can be eliminated. We shall be glad to have reports from neighborhoods where the disease appears, stating how serious it is, and whether the barberry bush is present in the neighborhood or not.

Advertising Milk

THE article on page 7 of this issue tells of the work that has been done in a number of New Jersey cities to advertise the food value of milk. Exhibiting a real live cow before groups of school children, milking that cow and giving the children drinks of the warm, fresh fluid, teaching that good milk and plenty of it is the best food for growth and health may all seem very elementary to farm folks. But this is likely to prove among the most valuable work ever undertaken by state educational and state marketing bureaus. It is a start that dairy farmers, thru organizations and thru individual effort, should develop and perpetuate. Mr. Bennetch says that salesmanship is one of the departments of farming that has been most neglected. Advertising of milk and promotion of greater consumption of all dairy products is not only wise salesmanship but a worthy public service.

Scientific investigations have demonstrated that milk contains one of two classes of elements that are absolutely essential to life and growth. Yet there are literally thousands of our people who are not using as much milk as they should. Dr. McCollum has stated that 20 percent of the people in New York City, young and old, are suffering from malnutrition—not insufficient food, but a bad selection of food. The one food most needed to "balance" or correct their ration is milk and its byproducts. In large city areas over half of the children are suffering from various diseases because of the lack of enough milk in their daily rations. This is not because these people are not able to buy milk, but because they do not appreciate the food value of milk. Judicious advertising of the food value of the product will do much to improve the health of the race, particularly the children, and will greatly increase the amount of dairy products sold. It is a work that can not be handled by individuals, but must be taken up by the larger organizations. The Interstate Association and the Dairymen's League are wisely assisting in the work that is being done, and they should have the support of every dairyman in extending the effort.

Send Us Your Photographs

HAVE you photographs showing general scenes, live stock, buildings or farm operations on your farm? We want photographs which tell stories of real farm operations or farm equipment. We want photographs which tell stories of real farming. Send us your snap shots if you have good, clear prints. Write your name and address plainly on the back of each, and say whether or not you want the photographs returned.—The Editors.

Educated Farmers

A READER recently raised the question of the value of a high school or college education for farmers. His doubts were expressed as follows: "If there is any place where a fair record of relative labor incomes for highly educated and only fairly educated farmers can show a heavy balance in favor of the college man, then it would be interesting to know from what sources those college men received their incomes." Evidently the old impression that "any fool can farm" is not entirely dead; but the farmer who has had to meet the complications of soil, climate, insects, diseases as well as labor difficulties in the production of his crop, and the further difficulties of marketing his crops to gain a reasonable return for himself and his family should be the last to doubt the value of special training for his job.

Few people in this age question the value of education as a training for any trade or profession. The skeptics usually have little regard for figures but the following summary of national surveys may at least prove interesting: With no schooling, of five million persons, only 31 attained distinction. With elementary schooling, of 33 million persons, only 808 attained distinction. With high school education, of two million persons, 1,245 attained distinction. With college education, of one million persons, 5,768 attained distinction. It has been deducted from wide investigations that the child with no schooling has one chance in 150,000 of performing distinguished service to his fellowmen; with elementary education, he has four times the chance; with high school education, he has 87 times the chance; with college education, he has 800 times the chance.

If one doubts the accuracy of averages, the following concrete summary may be more convincing: Less than one percent of American men are college graduates, yet this one percent of college graduates has furnished 55 percent of our Presidents, 36 percent of the members of congress, 47 percent of the speakers of the House, 54 percent of the Vice-Presidents, 62 percent of the Secretaries of State, 50 percent of the Secretaries of Treasury, 67 percent of the Attorney Generals, 69 percent of the Justices of the Supreme Court.

These latter figures deal with education and statesmanship rather than education and farming, but most of the big problems in farming in the future will call for statesmanship as well as physical skill and technical knowledge.

An Undefeated Enemy

OF THE 292,000 men drafted into the army from Pennsylvania, 4,817, or 1.6 percent, were rejected by the boards or in the camps on account of tuberculosis. This means that eight young men out of every 500 between the ages of 21 and 31 are tuberculous in the early stages of the disease. In all probability the proportion for the entire population is much higher since females seems to be more afflicted than males, probably on account of the difference in occupation and habits. When it is remembered that some person in the United States, dies from this disease every three minutes, or about 500 every twenty-four hours, and that in the great majority of cases it might have been prevented, we begin to realize the importance of the fight being waged against it. Appalling as were the casualty lists during the war, the deaths caused by tuberculosis in this country exceed the total deaths in our army every four months.

People living in the country are very generally of the opinion that tuberculosis is more prevalent in the cities than in the country. This is a logical conclusion because the natural conditions of the open country are more favorable to good health if the laws of sanitation are observed. But as a matter of fact investigations invariably show that a larger proportion of the people of the country develop the disease than is true of city populations. This is true, not because conditions are as good in the city, but because there is greater and more intelligent care taken against transmitting disease from the sick to the well. The army records referred to above show that the highest percentages of rejection for tuberculosis were found in three of the most strictly rural counties of the state, some of them reaching 4 percent.

The most effective work in fighting this disease is done by educating children to sanitary habits of life. If they are taught the rules of proper eating, sleeping, recreation and cleanliness ravages by this disease might be reduced to a minimum in one generation. But in order to do this, many of the adult prejudices and habits will have to be supplanted by intelligent guidance from those who know how to be healthful and avoid disease. One of the most efficient agencies in this state is the Pennsylvania Society for the prevention of Tuberculosis, with headquarters in Philadelphia. This society has several counties of the state thoroly organized and proposes to cover the state. It works thru the schools, granges and the various clubs and enlists the interest of children and young people in developing habits of life which promote health and happiness. The expenses of the society are met by the sale of Christmas Seal stamps.

HARRISBURG LETTER

Governor Well Pleased.—Governor William C. Sproul, the man who had most to lose by any shortcomings of the legislature which adjourned a session lasting almost six months, declared himself well pleased with the results of the sitting not only in a record-making address which he delivered to the lawmakers a few minutes before the gavels fell for the last time, but in chatting with friends. Just before leaving for his home for the week end the governor, standing on the steps of the Capitol, waved good bye to a group of legislators going home by automobile and, said: "When you consider it, this legislature has done a great deal. It has probably passed more legislation affecting the state government and paving the way for better things than any in years. Do you realize that for the first time the state will be in a position to collect all of its own taxes and that the departments will be more coordinated than ever before? I grant that you are right that the session was long, but this state is so vast, the interests of millions of people have to be considered and its business is so great that we can not judge by standards of the eighties. The legislature did a great deal of important work, whose results I might say will not begin to be apparent for some time."

Agricultural Changes.—One of the matters in which the governor takes special pride is the reorganization of the State Department of Agriculture which he says opens the way for making the department useful in lines where the limitations of former laws prevented. The ease with which the bill reorganizing the department went thru was one of the surprises of the session. The State Board of Agriculture had managed to defeat every effort to abolish it for years and time after time comprehensive plans of reorganization with the Board out were lost in the legislative shuffle, while the Commission of Agriculture idea was so firmly planted in the minds of some influential people that discussion of the project to kill that unfortunate body was avoided. The situation is now that the Department of Agriculture is organized on the plan of the most highly centralized business establishment. The chief, or Secretary, is a general manager just like the head of a big department of a factory and responsible to the governor just as are his people answerable to him. The complaint has been that there has been a lack of authority. There is now all that anyone needs and from present indications enough funds. Of course, frosts are going to come out of season, bugs will bite and pests will afflict plants and trees and the seventeen-year locust will continue to sing in the land. However, the frame work has been prepared for a great system and when the reorganization is formally effected this summer things should be in readiness to give that practical aid for which many men asked in years gone by when politics instead of production seemed to reign on Capitol Hill. But still it is a subject of remark at the Capitol that the old State Board should be abolished; the Commission be relegated to the list of administrative bodies crippled at birth and buried without a sob and the Department of Agriculture reorganized from cellar to comb of roof without even the croak of a rain crow.

Reorganization Soon.—The reorganization of the Department will be made effective as soon as the general appropriation bill carrying the funds is approved, which will not be long, and the bureau of markets bill is signed. This latter bill has been much discussed and finally passed the way the governor wanted it. One of the most important reorganizations will be in the plant and animal industry branches, which will be given more people and more authority, it being the desire of the governor that they should lead in research and investigation. Furthermore, the governor is in hearty accord with Secretary Rasmussen's idea of making Pennsylvania more of a cattle raising state and his plan of education of people in chances to make dollars is to be followed. The supervisory and control bureaus will be stiffened up.

The Bureau of Markets.—Already steps have been taken to get agreements in regard to standards for containers for vegetables and fruit and it is the idea for the Bureaus of Standards and Markets to name standards so that the state will have a few recognized and legal containers instead of something like thirty one. The new Bureau will issue these standards which will be based upon a bushel, for instance, and they will be sent to every section to educate people to the value of such a system. The Bureau will also make a specialty of reports on supplies, prices, rates, transportation and storage conditions and similar practical ways of helping, while attention will be given to the building up of the cooperative idea and the development of curb markets. It is the plan to have it work in conjunction with certain organizations which will be formed under the terms of the Jordan bill. All this, like the reorganization of the Department, will not come in a day, but the ground work has been laid.

Other Legislation. — There has been much other legislation affecting agriculture, including the extensive voting of money for highways; the enactment of the rural school consolidation and other laws looking to the improvement of educational matters; the compensation amendments because, ultimately, compensation will apply on the farm; the cold storage and the egg bills. The latter bill, which had a stormy time of it in the Senate, forbids the sale of stale eggs as fresh. It is a simple proposition with teeth in it and some crooks are going to get caught. The cold storage bill is believed to embody the best that can be obtained under conditions. It provides a year's storage.

No Change in Dog Law.—The efforts to change the law relative to dogs were not successful and the code of 1917 remains much as it was. There were times when it looked as tho it would be seriously affected.

Women to Vote.—The legislature of Pennsylvania ratified the woman suffrage amendment and passed for the first time an amendment to the state constitution. The vote was decisive in either branch and the influence of the governor was thrown to ratification, it being held to be a federal matter. The same course was followed in regard to prohibition and no legislation to curb the amendment will get on the books.

Appropriations Immense.—The appropriations made this year and which seem likely to be approved aggregate $104,000,000. It seems certain that over $100,000,000 will be approved. The fiscal officers say they have the money in sight and the highest record of any previous session in the way of voting money has been smashed into smithereens. Last session it was thought $87,000,000 was scandalous. Now the situation is that this figure has been beaten by over a dozen millions and the policy of the state in regard to charities is unchanged.

Teachers Get More.—The teachers of the state have won their battle for more salary, but the effect of the bill passed in the last hours of the session is not exactly known. It means that the state will have to give about $5,000,000 more a year and that some districts will have to impose additional taxation to raise their share. This problem was one of those which failed to get the thoro study that it should have had because of the preponderance of Philadelphia legislation and the eleventh-hour fights over the compensation, sedition and telephone bills. The trouble was that everyone wanted to give the teachers an increase and no one knew exactly how to go about it, altho many thought they did.

Pinchot on Commission. — One of the interesting occurrences of the final week was the naming of Gifford Pinchot as a member of the state Forestry Commission. He was much mentioned for it in the last four years, but never named.—Hamilton, Harrisburg, June 30, 1917.

NEW YORK LETTER

R. F. D. Service.—Congressman Norman J. Gould of Seneca County has arranged for a public hearing at Washington, July 8, of the rural postal delivery service of this state. A few of the 200 or more routes changed have been restored to the satisfaction of the patrons, but most of them are giving most unsatisfactory results. Six farms on one route out of Munnsville have been abandoned since the changes made in the spring, because of the unsatisfactory mail service. Prominent newspapers of the state are carrying sets of questions to be answered by rural residents affected by the changes, and S. J. Lowell, master of State Grange, H. E. Babcock, director of county farm bureaus and C. Fred Boshart, president of the State Agricultural Society will present the case for farmers at the Washington hearing, accompanied by a large delegation of leading men from this state and other states.

Convict Work.—A new permanent camp for convicts has been built near Skeneatles and they will repair roads in that vicinity. Two more escaped from the Virgil Camp this week and two from the Homer camp making seven or eight escaped during the short season they have been at work.

Vacation Exodus. — The Adirondacks, Catskill, St. Lawrence River and other water resorts report an unusual patronage for vacation outings. Passenger officials report a record season.

Beavers Upset Streams.—Sportsmen charge that beavers, by damning the Adirondack streams are preventing trout from spawning, hindering their propagation. They have been urging for some time that the laws protecting beavers be lifted.

Women Needed.— Three hundred and forty-five women are needed at once to fill the vacancies in the Womens' Land Army located in five Central New York counties—Oswego Seneca, Wayne, Madison and Onondaga. The farmers need help and the land army will engage in an intensive campaign for enrollment of helpers at once, in their New York office at 303 Fifth Avenue and at 212 East Jefferson Street, Syracuse.

County Meetings.—150 members of the Onondaga County Guernsey Club and the Farm Bureau held their annual outing at Baldwinsville this week. John R. Clancy, president of the State Guernsey Club gave an address. Over 2,000 Grangers and their wives held a meeting near Plattsburg.

Berry Dealers Combine.—The people of Binghamton and the growers of strawberries near that city are very indignant over the action of the berry dealers of that city, who went among the growers, who are comparatively few in numbers, just as the berries were ripening and contracted to take their season's output at 17½ cents a basket in the field. The dealers then put the berries on display in one store at 55 cents a quart. The other stores could secure no berries at so late a day and the people put up such a protest that the dealers finally reduced the price to 40 cents, a profit of 180 percent. Berries have had a rather short season, due to the drougth, but have brought growers 30 to 40 cents early in the season and usually not less than 20 cents as the season wanes.

Woman Rose Expert.—For the first time a woman, Mrs. Frank Neal, of Beverly Road, has won the challenge cup at the tenth annual exhibit of roses in Syracuse.

Farmers Disappointed. — The fourth farmers' day at the Syracuse State Employment Bureau was not the success others have been, as laborers were so scarce. Farmers came from 40 miles around, but only 12 laborers were secured. One man offered his farm of 160 acres and 60 head of stock with full equipment for $25,000, as he needs three men and can get none to operate it.

Apple Industry Decline.—The government began making a survey of the leading apple counties in 1917. It is now complete and it is found that New York produces one-fourth the apples of the United States. Most of the trees of the leading apple counties of this state were set in the early 60's and 70's and are now on the decline. The setting of young orchards has not kept pace with this decline and unless growers plant very freely at once a real apple shortage is sure for the future. Recent estimates say the crop for this state will be 2,500,000 barrels less than last year despite early forecasts.

NEW JERSEY NEWS

Governor to Attend Grange Outing.—Governor William N. Runyon will be among the notables who will attend the annual outing of the Mercer County Pomona Grange, which will be conducted at Springdale Park near Yardville, on Wednesday, August 6. The Governor will be accompanied on the outing by State Comptroller Newton A. K. Bugbee, who, along with Governor Runyon, is a Republican candidate for gubernatorial honors; National Grange Lecturer J. C. Ketcham, of Indiana; Master of the New Jersey State Grange Walter H. Havens, of Cranbury, and other men interested prominently in agricultural pursuits. One of the features of the occasion will be an address by the Governor and an athletic program to be participated in by soldier-sons of farmers, and sons who were not drafted in the recent war but aided materially in the winning of the fight by sticking to the plow and the harrow and raising the best of food for the "boys."

Prize Awarded For Dairy Judging. —The New Jersey State Experiment Station has awarded a prize calf valued at $150 to R. Conover, of Titusville, for his skill in dairy judging in a contest at the station. The calf is a high-class Jersey.

Will Tour Country.—Plans are being completed by committees from the Mercer County Poultry Association and the Mercer County Board of Agriculture for a tour by persons interested in the raising of poultry to the various poultry farms in Mercer County in the early future. The trip will be made by automobile, and owing to the great interest displayed in this section of the state in poultry raising, it is expected that the attendance will be large.

Will Visit Fruit and Vegetable Farms.—A committee from the New Jersey State Horticultural Society is arranging for an innovation in the regular annual summer meeting of the organization. At the invitation of the Monmouth County Board of Agriculture, the society will tour and visit fruit and vegetable farms in Monmouth County on Friday and Saturday, July 11 and 12.

Eradicate Tussock Caterpillars.— While this season has been comparatively free from tussock caterpillar attacks in the central part of the state, the efforts of the school children in collecting egg masses bearing fruit in the comparative absence of the pest, plans are being made for a campaign that will totally eliminate the scourge if possible. M. M. Burris, city forester in Trenton, has stated that now is the time to eradicate the caterpillar. He added that the egg masses that were not collected by the school children have hatched since the early part of this month, and are now beginning to spia cocoons on tree trunks and fences. These should be picked from the smaller trees and crushed.—Kelly, Trenton, June 30, 1919.

National Ayrshire Sale.—The first National Ayrshire Sale was held at Springfield, Mass., June 12, 1919. Forty-four head brought a total of $71,525.00, an average of $1,625 per head. Lotus Jean Armour, consigned by W. P. Schanck, of New York, topped the sale at $8,100, being purchased by C. H. Peverill, Iowa, at a world record price for the breed. Stephen Bull, Wisconsin, secured the second highest priced animal of the sale in the seven-year-old Highland Polly, at $7,500. The consignment consisted of two males and forty-two females. Nancy's Mintmaster, consigned by Wendover Farms, New Jersey, Grand Champion at the National in 1918, was purchased by T. J. Murphy, of Pennsylvania, a. $5.200. W. T. Tonner, also of Pennsylvania, was the largest bidder, securing eleven head for $14,550. The forty-four head were distributed among twenty purchasers, in ten different states.

Ayrshire Importation.—Frank S. Peer, Union Co., N. J., the noted importer of dairy cattle, cables from Scotland that he has purchased the Grand Champion Ayrshire Bull, Barboig Dignity, for Capt. A. Henry Higginson, Mass., the consideration being $7,500. Barboig Dignity is a four-year-old, and was awarded the Supreme Championship at Kilmarnock Show a month ago, defeating Howie's Hot Stuff, the young bull sold this spring at a world record price for the breed.

Farm Products Prices and Prospects

FALL FERTILIZER PRICES

As the result of the Department of Agriculture's conferences and communications with individual manufacturers of fertilizers, without the department having fixed any prices, it is now in a position to announce that the farmers of the country should obtain their mixed fertilizers for the fall season of 1919 at an average price of about 30 percent lower than the prices which prevailed for the spring season just passed.

This statement applies to the territory north of Arkansas, Tennessee, Virginia and West Virginia, but including the Ohio River counties of West Virginia. Fertilizer prices for the Southern States have not yet been put out. Statements concerning other territory will be issued as soon as prices are made.

The different companies in some instances will put out goods at slightly varying figures, but the accompanying table shows maximum f. o. b. prices at which the principal fertilizer grades at the three great centers for fertilizer distribution—Baltimore, Md., Philadelphia, Pa., and Carteret, N. J.—to dealers and to farmers ordering 30-ton lots may be obtained.

Competition May Lower Price

These prices are to dealers and to farmers ordering 30-ton lots and are based upon delivery in 167-pound bags. If in 200-pound bags 25 cents per ton should be deducted, in 125-pound bags 25 cents per ton, and in 100-pound bags 50 cents per ton should be added. These prices are subject to a discount of 5 percent if paid in cash on December 1 and a further discount of one-half percent for each month in advance of that date. These are maximum prices and competition in the trade may make prices lower.

The fertilizer trade conditions provide that these f. o. b. rates shall apply to New Jersey, Delaware, Maryland, and approximately the eastern half of Pennsylvania. In the Middle Western territory, including New York, western Pennsylvania, and the Ohio River counties of West Virginia and west to the western Missouri and Iowa boundary lines, $3.75 per ton will be added for freight to any railroad delivery point; to Long Island delivery points $2.50 per ton will be added; and to New England $4.50 will be added to rail, water, or trolley delivery points. In addition to the prices quoted to New England points there will be added $3 per ton for shipments in less than carload lots, from which a deduction is made of $1 per ton if a carload is ordered; $2 per ton in the event of two carloads and up to 99 tons; $2.50 for 100 to 199 tons, and $2 for 200 tons and over.

It is understood, of course, that to farmers ordering less than 30-ton lots there must also be added to these prices a fair profit to the dealer, which usually amounts to about $2 per ton.

Department's Aims Explained

The purpose of the department in issuing this statement is threefold: First, to reflect the action of the departmen in dealing with the fertilizer trade under the terms of the Food Control Act, approved August 10, 1917, and the President's regulations dated February 25, 1918. Second, to furnish to dealers and to farmers reliable information as to the maximum prices at which they may obtain their fertilizer supplies. Third, to prevent, as far as possible, the wide variations in prices paid by farmers to dealers for fertilizers delivered during the spring.

FERTILIZER PRICES

Maximum F. O. B. Prices at Which Principal Grades May be Obtained in 30-ton Lots at Three Trade Centers

Ammonia	Phos. acid	Potash	Price Per ton
0	8	3	$25.75
0	8	4	28.75
0	8	5	31.75
0	9	2	23.75
0	10	1	21.75
0	10	2	24.75
0	10	3	27.50
0	10	4	30.50
0	10	5	33.50
0	12	1	23.50
0	12	2	26.50
0	12	3	29.50
0	12	4	32.25
0	12	5	35.25
1	8	0	22.00
1	8	1	25.00
1	8	2	28.00
1	8	3	30.75
1	8	4	33.75
1	8	5	36.75
1	9	0	23.00
1	9	1	25.75
1	9	2	28.75
1	9	3	31.75
1	10	0	23.75
1	10	1	26.75
1	12	0	25.50
1	12	1	28.50
2	8	0	27.00
2	8	1	30.00
2	8	2	33.00
2	8	3	35.75
2	8	5	41.75
2	9	1	30.75
2	10	0	28.75
2	10	1	31.75
2	10	2	34.75
2	10	4	40.00
2	10	6	46.50
2	12	0	30.50
2	12	2	36.50
3	8	1	35.00
3	8	2	38.00
3	8	3	40.75
3	9	1	35.75
3	10	0	33.75
3	10	1	36.75
3	10	4	45.50
3	10	6	51.25
4	8	0	37.00
4	8	1	40.00
4	8	2	42.75
4	8	3	45.75
4	8	4	48.75
4	8	6	54.50
4	9	1	40.75
4	10	0	38.75
4	10	1	41.75
4	10	2	44.75
4	10	3	47.50
4	10	6	56.25

The matter of supply and prices of unmixed fertilizer material available to farmers for direct application to the soil or for home mixing, such as nitrate of soda, sulphate of ammonia, ammonia, the organic ammoniates, acid phosphate and potash salts, is still under investigation by the department. With the exception of acid phosphate, none of these standard materials are produced by the fertilizer manufacturers, altho some of the ammoniates are produced by companies of which the fertilizer companies are subsidiaries.

The department is also giving consideration to the differential in delivery rates.

SPADES AND CLUBS IN N. Y. AGRICULTURE

(Continued From Page 2.)

Probably the most important filler for some of the oats ground, or even for any available ground, is some crop or combination of crops to supplement the pasture. Animals appear to have the freedom of pastures at any time of the year on New York farms. The pastures are over-stocked and grazed early and late, often when there is nothing to graze on. Many farmers tell me that they planted or intended to plant oats and peas to supplement the pasture and provide independent succulence. There is no better crop in my opinion, but it must be planted early and pastured early. For a late summer supplement millet may be used with success. The common millet or barnyard millet may be planted any time after all danger of frost is over. If liberally supplied with available plant food, it will make a rank growth in 60 days and often makes sufficient growth for forage in 40 days. It is good to plant it in succession a few days apart, because it ripens so quickly that the feeding period is very short.

Rye For Silage

Interest in summer crops for ensiling is increasing. One of the most frequent questions among dairy farmers this year is in regard to the value of rye for silage. I have talked with a number of farmers regarding the practice and few believe it is profitable except, perhaps, as a means to an end. They claim that it requires more labor to handle it and that it is worth only about what it costs to handle it. They admit, however, that it makes it possible to maintain the milk flow in summer and at the same time to improve the pasture.

Alfalfa in New York

Farmers are still somewhat timid about alfalfa here in New York. Many carry the picture of a failure, either their own or a neighbors, and hesitate to attempt it even in a small way. There is unquestionably some grounds for their skepticism, because New York is a very wet state. I do not think I exaggerate when I estimate that 75 percent of the tilled land here needs drainage. In spite of this handicap, alfalfa does very well in some parts of the state, especially on the limestone soils. Even in other sections I have seen good crops under conditions at which New Jersey, Maryland and Delaware farmers would look askance.

This year will probably see more alfalfa planted in New York than any previous year. Professor Barron purchased 40,000 pounds of Grimm seed which was sold to farmers thru the New York State Grange Exchange. This purchase was based on the results of experimental plots which showed that Grimm alfalfa was superior for large areas of the state. It is not as prolific as common alfalfa but it withstands the winters well and does not seem to require quite as much lime after it has been established. On the limestone soils common alfalfa has given good results. Many farmers are mixing the two so as to have both plants with tap and branching roots in the same field.

Do "Seeds Run-out"

Commercial trades all have what they call their talking-points. So far as I am able to find out, seedsmen have told farmers for years that "seeds run-out." Undoubtedly this was a so-called talking-point to sell grain seeds to farmers every year. Farmers are now beginning to think about it. The best answer I have found to this question is the experience of a farmer in Washington County who is growing oats which have been in his family since 1778. Last year his 16-acre field averaged 64 bushels to the acre.

Labor Situation

There appears to be more labor to be had by farmers but much of it is inexperienced and expensive. The daily papers in cities, towns and villages have been agitating soldier settlement and the idea has been heralded as a splendid thing, mostly among city people and others who think rural life is fine. But my experience in New York is that so far few soldiers have returned to the farms except where it was necessary to hold the farm property or where some other conditions made it necessary. It is my opinion that farm conditions have not improved materially due to the war. Labor is expensive, supplies are expensive, roads are in poor condition, communication is poorer rather than better and the daylight saving law is a hardship.

Organization and Education

Organization has been very helpful to farmers of New York, especially the Farm Bureau Associations and the Dairymen's League. There is interest everywhere in community effort, but there is danger of over enthusiasm in small buying and selling cooperatives. The fore runner of success in this line of endeavor is necessity. In two many instances the necessity is not well defined.

In my travels I am continually impressed with the distorted, inaccurate knowledge of farming on the part of business men whom I meet in hotels all over the state. The importance of education of the farmer of principles underlying successful organization and cooperation, and of the city people of the existing farm conditions, was never greater than it is today. Accurate studies of the cost of production of all products should be made, and organizations should utilize every possible effort to put these and other results of studies of the farm business before the consuming public. "Come out in open" policy is the winner of the day. The farmer must make it his policy.

Increasing Milk Consumption

Publicity Campaigns in Cities Show What Can be Done in Advertising Food Value of Milk

PAUL B. BENNETCH, NEW JERSEY

During the past few months the dairy industry has passed thru its periodical stage of surplus, more or less common during those months when a large number of cows are freshening and going out to fresh spring pastures. In most cases distributors have been handling this supply of milk over and above what has been required for the liquid milk market and converting it into the various milk products demanded by the market.

The larger distributors who have either been equipped to manufacture or who had an outlet to manufacturers suffered less than small distributors who neither had manufacturing equipment or a direct outlet for their surplus milk and cream. In either case, however, the loss has been rather heavy. In some cases producers agreed to hold some milk and make butter or feed calves, but many objected to doing this because they were neither properly equipped, nor do the women folks have time to do this extra work.

This surplus period was therefore an opportune time for conducting publicity campaigns among city consumers relative to the importance of the increased consumption of milk and dairy products. Such work was done in the cities of Trenton, Newark, Paterson, Jersey City and Hoboken, New Jersey, commencing May 12 and ending June 21, by home demonstration agents of the U. S. Department of Agriculture and the New Jersey Agricultural College, working largely thru the medium of the public schools where ten minute talks were given to the children of each grade from the high school students down to the kindergarten on the value of milk in the diet. The children were told among other things that to have bright eyes, rosy cheeks, strong bodies and good brains they should have plenty of milk to drink. The value of milk in building bone and teeth was pointed out, as well as the bad effects of an insufficient milk supply, citing examples of boys and girls who drank coffee, tea and beer instead of milk for breakfast.

A unique feature of the campaign in Trenton was a good grade cow loaded on a large army truck, loaned by the Lawrenceville Soldiers' Agricultural School, and taken to three different, centrally located schools at about 3.30 P. M. on three separate days. The cow was milked into a small top pail by the efficient herdsman, Mr. McPherson, to demonstrate where milk comes from and how clean, wholesome milk is produced.

The children were intensely interested because most of them had never seen a cow milked and then they got an opportunity to get a free drink of milk from that freshly drawn and from a supply taken there in cans. Over 1,200 children were served in this manner at each school, and some of them carried an extra glass of milk home.

Employees of several stores and factories as well as several women's clubs were reached thru talks very similar to those given to the school children. The local press gave excellent, paid advertisements which further emphasized the message of more milk for better health. Very effective publicity was also secured by the distribution in packages sold by department and other stores of a little leaflet telling the story, "Milk is the Best and Cheapest Food." Other features of the publicity were some very effective window exhibits in a few of the centrally located store windows.

The Trenton campaign was supported by the Inter-State Milk Producer's Association and a few of the distributors, while the Dairymen's League and the large distributors gave similar support to the work in Jersey City and Hoboken. This phase of the work was handled by the Bureau of Markets of the State Department of Agriculture.

What were the results? The largest distributor in Trenton noticed almost immediate results in an increase in sales, and believes that the real effect of such work will be lasting. Consumption of dairy products will not be increased to what scientists tell us it should be for the best results until the dairy industry gets behind an organized campaign to keep the facts with regard to milk and its products constantly before the public the same as the producer of almost any staple article is compelled to do if he wants to increase

Wonder Mary Champion Cow Over Isle of Jersey and Canada in 1918, Sold at 1919 Cooper Sale For $3,300

Summer Advantages
of the
DE LAVAL

The superiority of the De Laval Cream Separator is more apparent and is more appreciated during the summer months than at almost any other time of the year.

Farmers appreciate the De Laval during the busy summer season because of its large capacity and the fact that it is easy to turn and easy to clean.

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Over 2,500,000 De Lavals are in daily use the world over—more than all other makes combined. More than 50,000 local agencies look after the needs of De Laval users.

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I will sell by mail, at just Half Price, my entire present stock of Five Hundred Silos. This make of silos has been on the market for many years, and has given complete satisfaction in all parts of the country. All are new and first class. Place your order within the next Thirty Days and save precisely one half.

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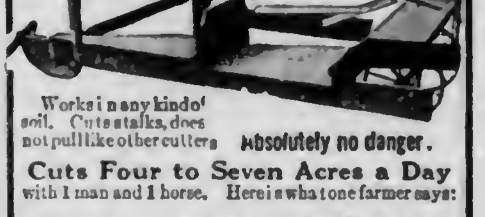

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Chicken Insurance—
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How long are you going to stand it?

You know that fox won't look at your traps. And when you sling lead at him with your old slow-as-molasses .30-30, he knows you're guessing—you don't know how much to hold over him to allow for the drop of the bullet or how much to hold ahead of him to allow for his speed. And he knows you're half afraid to shoot anyway—the old .30-30 bullet might glance and hit a cow or a neighbor.

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The .22 Savage Hi-Power rifle snaps its wicked little 70 grain Spitzer point bullet out 2800 feet—more than half a mile a second.

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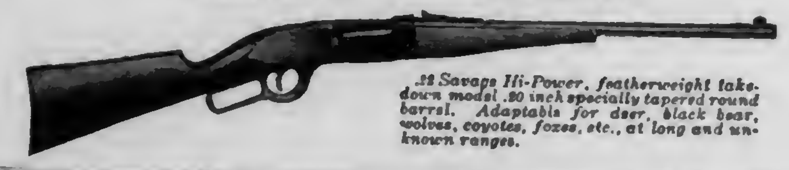

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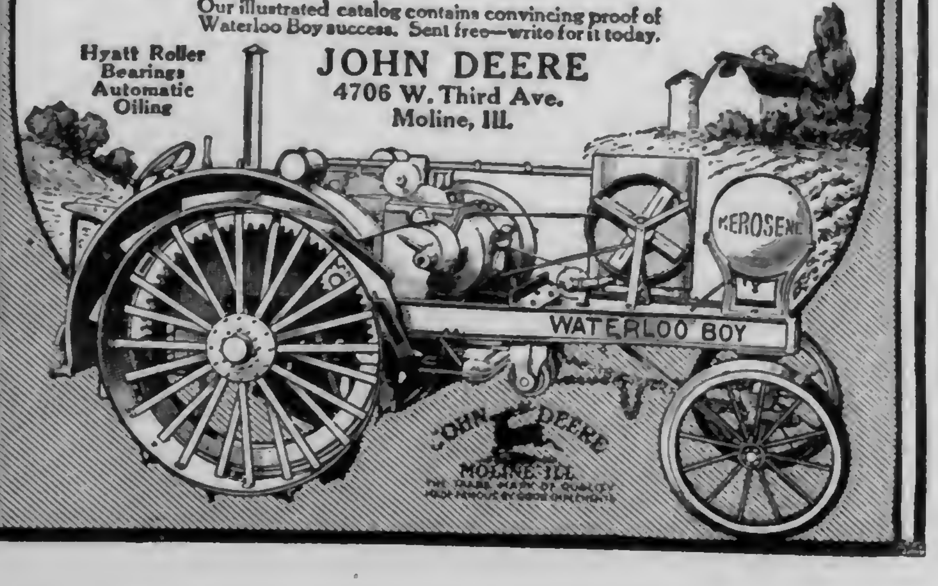

his business to profitable proportion.

The development of the dairy industry depends to a very large degree on the development of salesmanship—a field almost undeveloped in our industry. The necessary organization for such a project should be relatively simple. It requires that the producers' organizations and the distributors get together under some plan such as that of the National Dairy Council which has already done effective work thru some of its state units in the West. The dairy industry thru such an organized effort should take "the bull by the horns" and let the world know the real value of its products for which we have the foundation in scientific facts of scientists like Dr. McCollum. We have no false values to present, no shoddy or counterfeits to sell, but the public needs to know the simple truths about milk.

Lets get together to blow the horn of the dairy industry No one can or will do it but the producers and distributors of milk. Some good work has been done but so much more is needed.

MERCER COUNTY GUERNSEY BREEDERS AMALGAMATE

By March 1, 1917, the germ of Guernsey-ism in the section surrounding Grove City, Mercer Co., Pa., had developed to such an extent that a live young breeders' association was formed on that date. At that time most of the present members had only a pure-bred bull as evidence of their interests in the breed. During the ensuing 27 months almost unbelievable progress has been made. One of the first things done by the members was the institution of a lot of propoganda work thru the local press, agricultural papers circulating in this section and thru the breed journals. This all resulted in the purchase of a large number of females in individual lots and in one carload lot by the members of the association; also by dairymen who had not hitherto decided in favor of any particular dairy breed.

Then a little less than 15 months after its organization, it was voted by the association that no man could be a member of it unless he had his herd tested for tuberculosis under the acredited herd plan of the U. S. Bureau of Animal Industry and the Pennsylvania State Live Stock Sanitary Board.

About a year after the organization of the Grove City Association about a dozen young breeders located about twenty-five miles west of Grove City also formed an association, known as the Western Mercer Guernsey Breeders' Association. At the time this newer organization was formed it was felt that more could be done for the advancement of the breed in both sections if two organizations existed. Time proved this to be true, but such rapid progress was made that on June 20, this year, the two associations met in Mercer and voted unanimously to amalgamate into one association known as Grove City Accredited Guernsey Breeders' Association.

It was decided by the members to hold a picnic about the middle of August on the farm of Clyde M. Worley, near Mercer, and if possible to secure a speaker of national Guernsey repute. It was also decided by the members to extend every effort to put on a strong Guernsey Show at all the local fairs, with nothing but the best individuals to be shown. In the Fall the annual business meeting and election of officers will take place instead of in March as formerly.

The association now has a membership of 28. The following members have over ten head and are given in the order of size of their herds: Weber Bros., 22 head; A. S. McCullogh, 18 head; Dickey Bros., 13 head; Hugh Fergus, 13 head; Clyde M. Worley, 12 head; R. C. Finney, 11 head.—F.

DAIRYMEN'S LEAGUE JULY PRICE

Dairymen's League milk for July has been sold for $3.01 per hundred pounds for 3 percent milk. This is the base price at 200 miles from New York. The usual freight and butterfat differentials apply. The price was obtained by the price plan which has been in operation between the producers and the dealers since April 1. During the months of April, May and June an arbitrary deduction of 15 cents was made because of large amounts of milk produced in these months But according to the plan, no deductions are made except for these three months, and arbitrary additions are made in other months to allow for the cost of production. This addition for the July price is 16 cents a hundred.

There is very little time in the year when farmers do not have to feed grain to supplement the pasture. The least grain is fed during the month of June, but in July when the pastures become dry and burnt, considerable quantities of grain have to be fed. There has been a gradual but almost steady advance in prices of feed during the past year, and at the present time the price is the highest in the history of the industry with prospects that it will keep on increasing. The price of hay also has reached the record mark.—Dairymen's League Inc.

PARTITION IN SILO

I noted an article in a recent issue on partition in a silo, and a request for report on experiences with such an arrangement. I have used such an arrangement for a number of years. It is a decided success, holding winter silage late into the spring. I also use it for summer silage. I cover one side with old newspapers, forest leaves, etc, and then cover with boards to hold this covering on. This works out perfectly, enabling me to use the other side as fast as tho there was no partition.

One year I raised the partition by building up with heavy boards. I built these in across the silo and battened the ends, cementing in at the ends and over the cracks between boards. Care was taken when filling the silo to fill both sides alike and tread carefully around the edges. It is very necessary to tread well for summer silage, especially when only a few feet of silage is put in. I find that it is well to tread it all over every day when first starting to use the silage. My silo is of tiling, built with cement over 20 years ago. It is 8½ by 24½ feet, all above ground, and has never needed any repair.—Clarence W. Gardner, Cumberland Co., N. J.

CHAIN FOR TETHERING COW

Occasionally it is desirable to tether a cow or other animal to eat the grass around the house or roadside. I have frequently done this and I am thru using a rope for the work.

A cow chain beats anything for this purpose that I have ever had, and they last so many times longer than a rope that there is no comparison. A 30-foot chain with a snap on and a ring in the other end will cost about $1.25 now, and you know how far that money would go in buying rope.

I have found that if you fasten a snap of some kind about 6 feet from the ring end of the chain, you can easily fasten the cow to a fence or almost any stationary object. The snap will fit into any link of the chain so you have most any length of chain for the cow to use. This is handy when you are tying near shrubs or plants that you do not want harmed.—Earl Rogers.

ENSILOING ALFALFA

Reader, Cherryville, Pa., asks if it is advisable to cut green alfalfa into the silo.

There have been many reports of this being done with satisfactory results, but frequently the alfalfa silage comes out a poor, ill-smelling mass. Henry's Feeds and Feeding accounts for this by saying it is due to the high protein content as compared with the small amount of sugar from which the acids necessary to preserve the silage may be formed. In very wet, rainy seasons when it seems impossible to get the alfalfa into the barn in fit condition, or when the alfalfa is ready to cut in the midst of a rainy spell, it may be advisable to cut into the silo. But as alfalfa retains its palatability even when discolored by weathering, it seems preferable to feed it as hay rather than take a chance with it as silage Where alfalfa must be cut into the silo it should be cut in as soon as cut, and run thru a silage cutter to make it pack well and feed out easily. Where it is partially cured out it should be cut in with the dew on or some water should be added as it goes into the silo.

TROUBLE IN MILKER TUBES

Milking machine cleaning trouble sometimes lies in faulty placing of the rubber tubes and teat cups in the sterilizing solution. They should be so placed in the jar or crock that no air will be trapped in the tubes. The solution which is to prevent the growth of bacteria should touch all the inside wall of the milk tubes and connections, and for this a large crock is necessary—20 gallons at least and better 30 gallons for three sets of tubes. When letting the tubes down into the solution, one should not lap or double them up but hold them by one end, keeping them straight and letting them down into the solution slowly.

A way to make sure that all air is excluded is to remove the screw cap at the end of the claw, in cases where this cap is without an air opening, as this allows the sterilizing solution to reach the small passages and turns in the claw connections. Success in keeping the milking machine clean need not mean a lot of extra labor. In fact, workers in rural engineering at the New York College of Agriculture think that many farmers who complain about the bother of producing a satisfactory quality of milk by machines are spending more time than they need to properly clean them.

Not many farm home gardeners this year will fool away any time on vegetable novelties. Staple vegetables are good enough.

Extra Help and High Wages, or—

THE old way of cutting corn by hand was the nightmare of the farmer It meant a big force of men, a big expense and gruelling, slow, irksome work. It was not always possible to get the men needed. But times have changed. The old way has stepped aside for the new, better, easier way.

McCormick and Deering Corn Binders cut the corn swiftly and neatly when the sweet, nutritious juices which make the fodder palatable are still in stalks and blades.

McCormick and Deering corn binders are clean-built, sturdy, compact and easy running. They have sufficient traction to operate successfully in the loose ground in the cornfield, and cut readily the toughest-fibered cornstalk. One of these machines drawn by a tractor or three good horses, a two-man outfit, will harvest from five to seven acres a day, cutting and binding the whole crop in neat, convenient bundles.

The many unusual features of these machines that are responsible for their time and labor-saving qualities will be shown you by a nearby International dealer, or you can get full information by writing the address below.

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Binders Push Binders
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Planting and Seeding Machines
Corn Planters Corn Drills
Grain Drills Broadcast Seeders
Alfalfa and Grass Seed Drills
Fertilizer and Lime Sowers

Haying Machines
Mowers Side Delivery Rakes
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Tedders Loaders (All types)
Baling Presses Rakes
Sweep Rakes Stackers
Comb. Sweep Rakes & Stackers
Bunchers

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Ensilage Cutters Corn Shellers
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Hay Presses Stone Burr Mills
Threshers Feed Grinders
Cream Separators

Power Machines
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Motor Trucks Gasoline Engines

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that is really practical. Adjustable door frame with ladder combined. Catalogue gives full information.
Agents wanted who can sell and can devote some time. Write
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Entire house evenly heated by one register—no pipes. Floor drafts done away with by special Summit installation with cold air returns. Simple to install in new or old building; fits any cellar or small excavation. Saves fuel—easy to run. Suitable for houses, churches, schools, shops, etc. Write Us Direct For Name of Nearest Dealer.
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Before You Buy Your Silo, Investigate the reliable Green Mountain. Send for circulars describing long-life, tight construction, new Anchorage System, etc. Creamery Package Mfg. Co., 345 Mill St., Rutland, Vt.
GREEN MOUNTAIN SILOS

HORTICULTURE

CICADA (17-YEAR LOCUST) EXPERIENCE

By J. P. STEWART.

In the regions affected, one of the most important horticultural events of the current season has been the onset of the cicada or 17-year locust. Our previous notes on this insect have been confined to predictions of their coming and suggestions for their control especially on young trees. In the present discussion we can record some real experience with the present brood and with the protective measures recommended.

In the first place, let us state that the current visitation of brood 10, as this brood is officially known, has come fully up to expectations in point of numbers. This is true in the wooded sections of Southern Pennsylvania at any rate. It was expected to be a large visitation, as brood 10 is one of the largest on record. The encroachments of civilization were expected to reduce its numbers, however, so that it would not be as serious in its effects as heretofore. This expectation has not been fulfilled in the section named above, and the amount of damage to unprotected fruit trees of all ages has been rather more serious than was expected by the writer at least.

In the section named the cicadas began emerging from their 17-year incubation underground about the 25th of May. They reached their height about June 10 to 15, and were started definitely on their decline by the 20th of the same month, tho their "stinging" or egg-laying operations were by no means ended by that date. In many places, they seemed to prefer the wood of young apple and peach trees to anything else they could find. This was especially true of those sections where very recent forest fires had killed the young natural growth. In such sections, the insects swarmed out over the adjacent orchards in veritable clouds, and in many cases piereced wood of the third and fourth season's growth with repeated lines of eggs, and left scarcely a twig younger than that untouched. Many an apple and peach twig bearing fruit was so severely stung back of the point of attachment of the fruit that the whole twig was broken off by its own weight, and the writer observed one 10-year-old Jonathan tree on the edge of a burned-over woods, so severely stung as to practically destroy its crop and even jeopardize the life of the tree.

There was evidently no ordinary method of protection available for such trees as that, but the protection previously suggested for young trees of 0 to 2 or 3 years proved very efficient, while unprotected trees of similar age were practically ruined in many cases. The protection used consisted of newspaper wrapping up to the branches, and a complete covering of cheese-cloth above that. The cheese-cloth was much cheaper than ordinary mosquito bar and was about as good, altho it became torn or ripped by the winds and growth of the tree rather more readily, and wherever an opening of any kind appeared, some cicada was sure to find it and begin her operations. The cloth to cover 250 trees cost but a trifle over 3 cents for each tree, and it practically saved the life of the entire lot. The labor cost of course was fully as much, and the removal of the protectors is still to be done, but the covering was evidently very distinctly worth while.

Several interesting habits of the insects appeared, among which may be mentioned their habit of coming down the trees at night and collecting in large number near the tree bases, both in the evenings and mornings. This made a very convenient opportunity for their attack, especially on the part of the pigs and poultry, and both of them were very prompt in taking advantage of the situation. In one orchard where pigs were running, they beat regular paths from one tree to the next in their effort to keep the cicada population in check so far as possible and incidentally to improve their own protein supply. In this particular orchard, the pigs proved a very substantial aid in reducing the injury from this pest.

The eggs will probably begin hatching about the middle of July, and it is important to know whether the young insects will find the exotic roots of the peach and apple a satisfactory host, and if so whether their 17-year feed, in the large numbers apparently in sight, will develop any permanently retarding effects on the general performance of the trees. It is evidently preferable to keep them off the roots so far as possible, but it is difficult to devise any practicable way of doing this.

One could go thru the orchard and clip off and burn all the twigs that have broken partly off as a result of the stinging, but this would leave myriads of eggs in the twigs that are still unbroken and hence would probably prove of little value. Vigorous surface cultivation from mid-July to about the middle of August would probably kill a large percentage of them before they get well located in the ground and hence may be the most satisfactory means of combatting them, wherever such a period of tillage is practicable and safe.

Any definite experience which any of our readers may have on the need for protective measures against the underground action of the young cicadas, and also on the best means of accomplishing the protection desired will doubtless be appreciated by those now in the infested territory.

Incidentally, we might say that we have seen no evidence of any injury to the poultry, either small chickens or large, from unrestricted feeding on the adult cicadas, and the opportunity for an overdose was certainly present this year. This is of interest in view of the warning that came out on this line recently from certain official quarters. Further experience and observations along this line may also be of interest.

This New Jersey Trucker Delivers His Produce Quickly and Safely

TIMELY TRUCK NOTES

By R. W. DeBAUN.

Vegetables Need Rain

A very severe drought is checking the growth of the truck crops (last part of June.) The soil is hard and dusty so that the early potato crop especially is being injured everywhere. Local showers in a few instances have helped for a few days at a time but when the soil is completely dried out, it takes a heavy rain to soak deeply into it.

The drought has already reduced the yield of early crops such as strawberries, cabbage, peas, lettuce, etc. The canhouses have canned very little rhubarb because there is very little ready to be pulled. The early pullings sold well for immediate use and the dry weather has prevented the production of a desirable pulling for the canneries. Unless rain comes soon there will be great reductions in the yield of other crops such as early tomatoes, onions, sugar corn, beans, etc. One consolation is that it is a good time to make hay. Some farmers believe that it brings rain to mow the big meadow.

Weeding Onion Sets

The thickly planted onions from seed for the production of sets are growing beautifully and they look to be free from weeds and grass. However, when we go into them we find that they are many weeds such as narrow leaf plantin, caterpillar grass, rag weed, mouse eared chickweed, clover, etc. If this material was left to grow it would be almost impossible to gather the sets; therefore, we have been busy today getting out the trash. The best tool for the work seems to be a little knife such as the housewife would use in peeling potatoes. When using the knife to get out weeds near onions, the workers are instructed to place the knife between the weeds and onions and cut downwards and away from the onion.

Save Seed Early in Bearing Season

Now is the time to think about saving the early tomato seed for next year's plantings. It is definitely known that all tomatoes formerly came from quite worthless stock and that all varieties and strains have an inherited tendency to go back to the original kinds. Therefore, unless the tomatoes for seed purposes are carefully selected from the most desirable plants, the stock will deteriorate every year.

It is firmly believed that the tomatoes which are the first to ripen contain the strongest seed. Plants grown from seed selected early in the season will bear an earlier and heavier crop than seed saved late in the bearing season. This same principle holds true for such crops as peppers, cantaloupes, eggplants, etc.

NOTES FROM A MARYLAND GARDEN

Down here in Southern Maryland where the vegetable crops are not irrigated they look as tho they have concluded that life is not worth living. We have had but one light rain since the tenth of May, while the Baltimore papers say the rainfall for June has been above the normal. One can turn no moisture in the soil a foot deep. How any plants live is a mystery. I have the Skinner irrigation system over part of my garden and the difference between this part and the non-irrigated part is wonderful.

I set two patches of tomato plants early. One lot was set under the irrigating pipe and has been trained to stakes with a single stem. These plants are carrying 15 to 20 tomatoes and still growing and blooming. The other lot of exactly same age and treatment was planted beyond the irrigating pipe and not trained. They are not half the size now that the others are and have only a few small green tomatoes. I pulled the first red tomato on the 19th of June from the irrigated plants.

The strawberry crop was very short. The weevil destroyed many blossoms and the frost killed more. Those who had berries got a very fine price. The lowest price for 32 quart crate was $6 and the highest $11.50 at the car. And yet a city man in a Philadelphia morning paper told the people that the price was high because the canners were buying up the berries to make syrup for the soda water fountains. No one could afford to make syrup of strawberries at the price they sold for this season.

Plans were made for a greatly increased area in sweet potatoes but the drought has cut this short for no matter if the plants are set with the watering machine as most of them are, the watering at setting will not last long and the plants are dying by the thousand daily. It looks as tho the high price for sweet potatoes will keep up.

Early Dewberries and Early Harvest blackberries are on the market. My plants of the Nanticoke blackberry are loaded with green fruit and will not turn color for more than a month yet. It is a pity that this fine late berry will not ship for it is of fine quality, but it gets soft as soon as ripe. It is a tremendous grower and the great canes are armed with the fiercest of hooked thorns. Last summer I was sick and failed to get the canes stopped at the right height, and an old man I had taking out the old canes after fruiting let the new ones remaining full length so that I have some now nearly ten feet high and it looks as tho we will have to use a step ladder to get the berries.

I have another late berry, a trailing dewberry called the Atlantic. This, too, is a rank grower and has beautifully cut leaves. So far, the fruit is small and poor, and if they do no better this summer they will be rooted out in spite of their pretty leaves. This berry runs to September.

A man in Oregon sent me some plants which he claims to be a cross between blackberry and raspberry. I rather suspect that it is simply the same as the Loganberry, which was claimed to be the same cross, but has since been determined to be a pure blackberry of a reddish color, native to the Pacific coast. I have grown the Logan berry and it certainly is fine, but it makes too small a crop to pay for the room it takes. Few native fruits of the Pacific side do well here. I have planted the Oregon berries and another season may have the fruit. In our hot, sandy soil red currants do not live long. I am now run down to three bushes and one of these looks as tho this year will be its last. One has to be continually rooting more currant cuttings if one keeps up a supply of this fruit.

The drought has shortened the early Irish potato crop very seriously. The plants set plenty of potatoes but they simply stopped growing top and bottom for lack of moisture. The price for first class potatoes will probably continue high. There are some heavy heads of the Copenhagen Market cabbage on the market, but the small early Wakefields sell better since one is enough for most families. With no signs of rain, it is hard to see what any crop will do now.—W. F. Massey, Wicomico Co., Md.

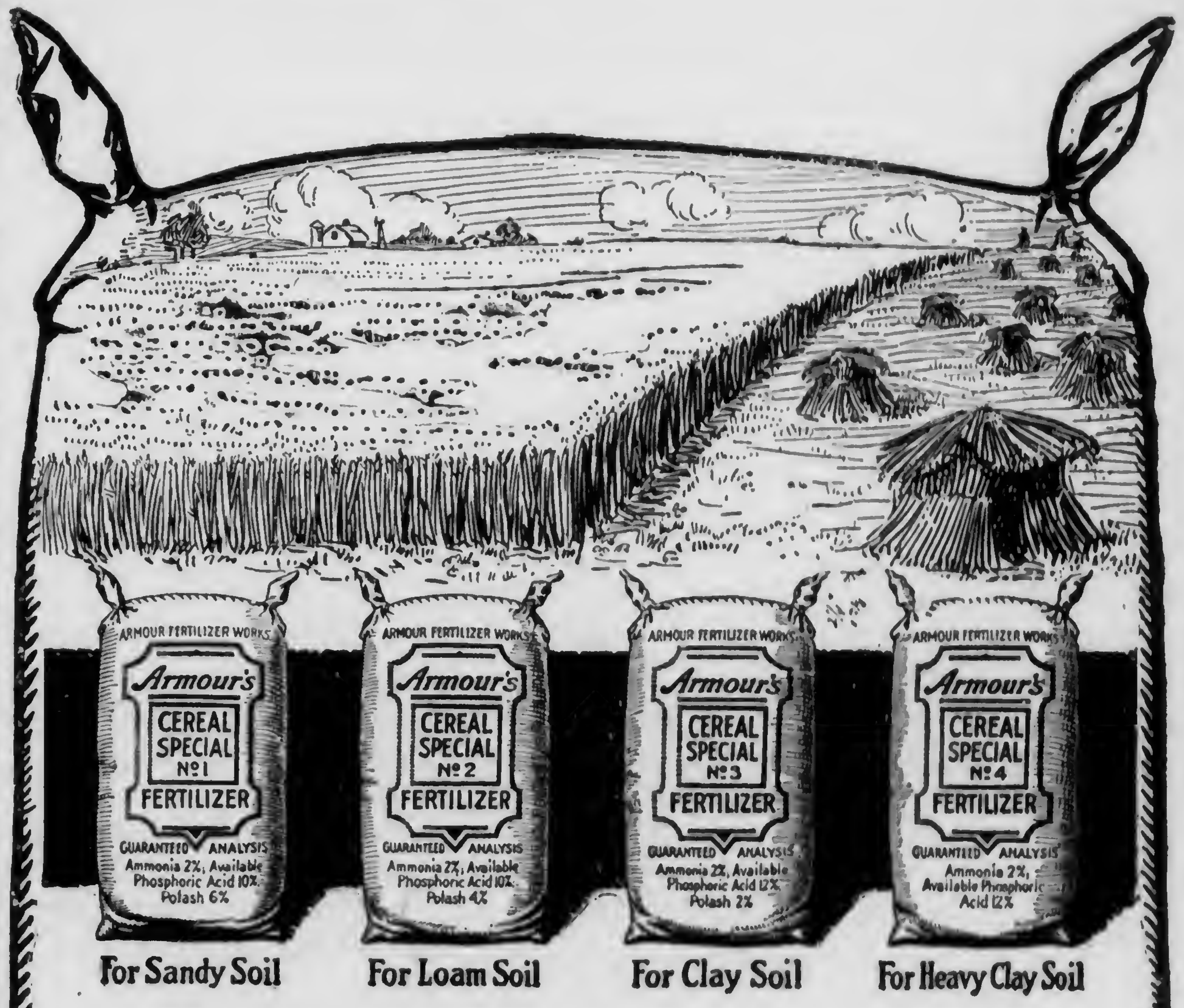
BIG RETURNS FROM STRAWBERRIES

Because of the unprecedented demand for strawberries for flavor for soda water, high prices were obtained thruout the season. The state's strawberry growers did a wonderful business, and big prices are predicted for raspberries, blackberries, peaches and other fruits. Strawberries in great quantities were packed in barrels, placed in cold storage to be pressed into sirup later in the season.

Eastern Shore farmers did a big business and are enlarging their strawberry fields, where there were six acres, they are doubled or tripled. Acreage this year was below normal because war conditions last year caused poor express service, and discouraged growers plowed up their berry plots.

A Carolina County farmer collected $14,000 gross receipts from this fruit and netted $1,500, all from a 12 acre lot. On three acres a colored trucker of Wicomico County cleared $1,700 which he placed in bank. From a two acre lot another Eastern Shoreman cleared $2,000. When a man in this community (Woodlawn) brought home $250 for a wagon load of berries, it is easy to believe how money could pile up.—Marylander.

Home gardens fit in with any - gram of better farming and better home making.



The Right Fertilizer for Wheat

BE sure you have the right fertilizer for wheat this Fall. Feed your wheat crop just the plant food that it needs and what the soil lacks. Too much of one element and not enough of another is wasted plant food and results in lower yields.

Feed your wheat right. Armour's Cereal Special Fertilizers fill every wheat need—quickly available ammonia to give the young plant a good start and a strong, healthy root growth before Winter — sturdy, vigorous plants that are ready to grow as soon as the ground warms up. Two per cent of ammonia is enough. It is not practical to use less than two per cent of ammonia and not necessary to use more. Enough phosphoric acid to strengthen the straw, fill out the grain and ripen the crop early. Sufficient potash to help the phosphoric acid fill out the grain and make it plump and heavy. ***You pay the thresher by the bushel, but you sell by the weight.***

Armour's
Cereal Special
Fertilizers

supply the right balance of plant food to grow the most wheat at the least cost per bushel. They eliminate guesswork and waste. The formula is right—the materials are the best that can be had, and only those suited to the special needs of the wheat crop are used. They cut the cost of production and make bigger wheat profits certain.

Choose the Fertilizer That Suits Your Soil

On sandy soils—use Armour's Cereal Special Fertilizer No. 1—2-10-6.
On loam soils—use Armour's Cereal Special Fertilizer No. 2—2-10-4.
On Clay soils—use Armour's Cereal Special Fertilizer No. 3—2-12-2.
If you have a heavy clay soil which you know can supply the necessary potash use Armour's Cereal Special Fertilizer No. 4—2-12-0.

Low Plant Food Cost

Armour's Cereal Special Fertilizers are concentrated to the highest practical point, so that the plant food cost will be as low as possible. They are made with the best materials adapted to the special needs of the wheat crop; they are manufactured by the latest and most efficient methods, in modern factories, under the supervision of trained men.

Get Your Fertilizer Early

See our local sales agent NOW; have him reserve your Fall requirements. Ask him for a copy of our booklet, "Turning Fertilizer Dollars into Wheat Dollars," or write direct to our nearest office. Don't delay — wheat seeding time will soon be here.

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SAVAGE

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A .22 Savage Hi-Power

A FLURRY of feathers, a squawk and a red streak going under the fence—another chicken gone!

How long are you going to stand it?

You know that fox won't look at your traps. And when you sling lead at him with your old slow-as-molasses .30-30, he knows you're guessing—you don't know how much to hold over him to allow for the drop of the bullet or how much to hold ahead of him to allow for his speed. And he knows you're half afraid to shoot anyway—the old .30-30 bullet might glance and hit a cow or a neighbor.

You need Chicken Insurance—the .22 Savage Hi-Power—the special tool for the job.

The .22 Savage Hi-Power rifle snaps its wicked little 70 grain Spitzer point bullet out 2800 feet—more than half a mile a second.

You don't have to guess how much to hold over—you don't have to guess how much to hold ahead—you simply hold dead on. And at the crack of the gun the vicious little bullet bites in right where you are holding.

It hits a paralyzing, explosive, knock-out punch—hits hard enough to drop grizzly and moose dead in their tracks—yes, and tiger and buffalo, too, because its done it.

But it is safe to use anywhere, because the bullet will not glance. You can't make it glance, not even from water.

These are some of the reasons why so many United States Forest Rangers and Government hunters and professional wolfers use the .22 Savage Hi-Power. It's the modern, special tool for predatory animals—and, besides that, Captain E. C. Crossman, the United States Army Ordnance Department Expert, called it "The Best Deer Rifle in the World."

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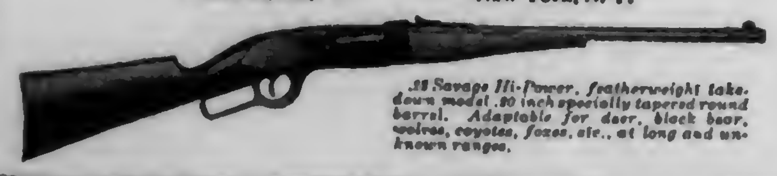

.22 Savage Hi-Power, featherweight take-down model .20 inch specially tapered round barrel. Adaptable for deer, black bear, wolves, coyotes, foxes, etc., at long and unknown ranges.

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Dependable Power that does not fail when your farm work has been delayed and you must take advantage of favorable weather and ground conditions.

Reserve Power that's available in emergencies—for variable soil conditions or upgrade work.

Simple Power which the inexperienced hired man can utilize to full day capacity, at any drawbar or belt job on the farm.

Economical Power that insures low operating cost—works all day under full load on 18 gallons or less of cheap kerosene.

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Waterloo Boy fully sustains the quality-fame attained by Waterloo Boy power machines in 25 years' manufacturing success. Backed by a plain guarantee from a responsible manufacturer. Two-speed motor supplies ample reserve power for tillage operations, and belt power for all farm needs, including threshing. All working parts of the Waterloo Boy are easily accessible.

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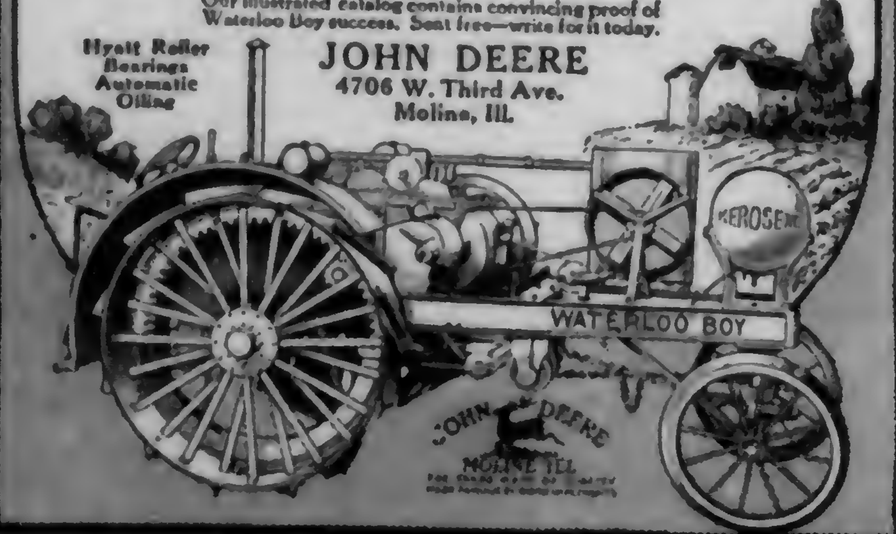


his business to profitable proportion.

The development of the dairy industry depends to a very large degree on the development of salesmanship—a field almost undeveloped in our industry. The necessary organization for such a project should be relatively simple. It requires that the producers' organizations and the distributors get together under some plan such as that of the National Dairy Council which has already done effective work thru some of its state units in the West. The dairy industry thru such an organized effort should take "the bull by the horns" and let the world know the real value of its products for which we have the foundation in scientific facts of scientists like Dr. McCollum. We have no false values to present, no shoddy or counterfeits to sell, but the public needs to know the simple truths about milk.

Lets get together to blow the horn of the dairy industry. No one can or will do it but the producers and distributors of milk. Some good work has been done but so much more is needed.

MERCER COUNTY GUERNSEY BREEDERS AMALGAMATE

By March 1, 1917, the germ of Guernsey-ism in the section surrounding Grove City, Mercer Co., Pa., had developed to such an extent that a live young breeders' association was formed on that date. At that time most of the present members had only a pure-bred bull as evidence of their interests in the breed. During the ensuing 27 months almost unbelievable progress has been made. One of the first things done by the members was the institution of a lot of propoganda work thru the local press, agricultural papers circulating in this section and thru the breed journals. This all resulted in the purchase of a large number of females in individual lots and in one carload lot by the members of the association; also by dairymen who had not hitherto decided in favor of any particular dairy breed.

Then a little less than 15 months after its organization, it was voted by the association that no man could be a member of it unless he had his herd tested for tuberculosis under the acredited herd plan of the U. S. Bureau of Animal Industry and the Pennsylvania State Live Stock Sanitary Board.

About a year after the organization of the Grove City Association about a dozen young breeders located about twenty-five miles west of Grove City also formed an association, known as the Western Mercer Guernsey Breeders' Association. At the time this newer organization was formed it was felt that more could be done for the advancement of the breed in both sections if two organizations existed. Time proved this to be true, but such rapid progress was made that on June 20, this year, the two associations met in Mercer and voted unanimously to amalgamate into one association known as Grove City Accredited Guernsey Breeders' Association.

It was decided by the members to hold a picnic about the middle of August on the farm of Clyde M. Worley, near Mercer, and if possible to secure a speaker of national Guernsey repute. It was also decided by the members to extend every effort to put on a strong Guernsey Show at all the local fairs, with nothing but the best individuals to be shown. In the Fall the annual business meeting and election of officers will take place instead of in March as formerly.

The association now has a membership of 28. The following members have over ten head and are given in the order of size of their herds: Weber Bros., 22 head; A. S. McCullogh, 18 head; Dickey Bros., 13 head; Hugh Fergus, 13 head, Clyde M. Worley, 12 head; R. C. Finney, 11 head.—F.

DAIRYMEN'S LEAGUE JULY PRICE

Dairymen's League milk for July has been sold for $3.01 per hundred pounds for 3 percent milk. This is the base price at 200 miles from New York. The usual freight and butterfat differentials apply. The price was obtained by the price plan which has been in operation between the producers and the dealers since April 1. During the months of April, May and June an arbitrary deduction of 15 cents was made because of large amounts of milk produced in these months. But according to the plan, no deductions are made except for these three months, and arbitrary additions are made in other months to allow for the cost of production. This addition for the July price is 16 cents a hundred.

There is very little time in the year when farmers do not have to feed grain to supplement the pasture. The least grain is fed during the month of June, but in July when the pastures become dry and burnt, considerable quantities of grain have to be fed. There has been a gradual but almost steady advance in prices of feed during the past year, and at the present time the price is the highest in the history of the industry with prospects that it will keep on increasing. The price of hay also has reached the record mark.—Dairymen's League Inc.

PARTITION IN SILO

I noted an article in a recent issue on partition in a silo, and a request for report on experiences with such an arrangement. I have used such an arrangement for a number of years. It is a decided success, holding winter silage late into the spring. I also use it for summer silage. I cover one side with old newspapers, forest leaves, etc, and then cover with boards to hold this covering, on. This works out perfectly, enabling me to use the other side as fast as tho there was no partition.

One year I raised the partition by building up with heavy boards. I built these in across the silo and battened the ends, cementing in at the ends and over the cracks between boards. Care was taken when filling the silo to fill both sides alike and tread carefully around the edges. It is very necessary to tread well for summer silage, especially when only a few feet of silage is put in. I find that it is well to tread it all over every day when first starting to use the silage. My silo is of tiling, built with cement over 20 years ago. It is 8½ by 24½ feet, all above ground, and has never needed any repair.—Clarence W. Gardner, Cumberland Co., N. J.

CHAIN FOR TETHERING COW

Occasionally it is desirable to tether a cow or other animal to eat the grass around the house or roadside. I have frequently done this and I am thru using a rope for the work.

A cow chain beats anything for

this purpose that I have ever had, and they last so many times longer than a rope that there is no comparison. A 30-foot chain with a snap on end a ring in the other end will cost about $1.25 now, and you know how far that money would go in buying rope.

I have found that if you fasten a snap of some kind about 6 feet from the ring end of the chain, you can easily fasten the cow to a fence or almost any stationary object. The snap will fit into any link of the chain so you have most any length of chain for the cow to use. This is handy when you are tying near shrubs or plants that you do not want harmed.—Earl Rogers.

ENSILOING ALFALFA

Reader, Cherryville, Pa., asks if it is advisable to cut green alfalfa into the silo.

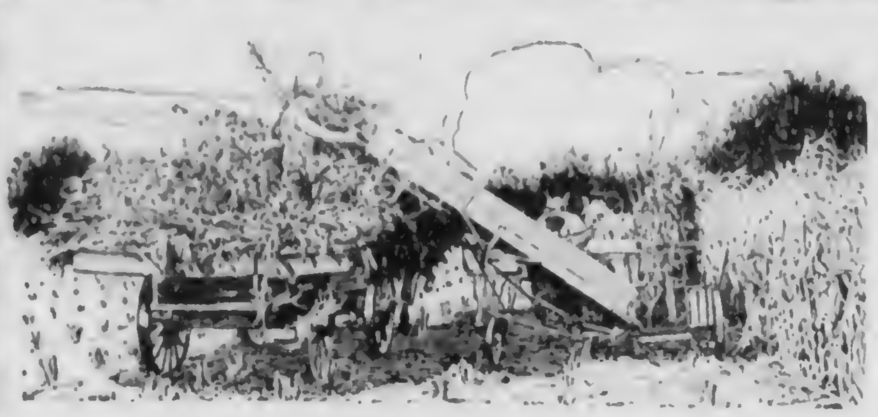
There have been many reports of this being done with satisfactory results, but frequently the alfalfa silage comes out a poor, ill-smelling mass. Henry's Feeds and Feeding accounts for this by saying it is due to the high protein content as compared with the small amount of sugar from which the acids necessary to preserve the silage may be formed. In very wet, rainy seasons when it seems impossible to get the alfalfa into the barn in fit condition, or when the alfalfa is ready to cut in the midst of a rainy spell, it may be advisable to cut into the silo. But as alfalfa retains its palatability even when discolored by weathering, it seems preferable to feed it as hay rather than take a chance with it as silage. Where alfalfa must be cut into the silo it should be cut in as soon as cut, and run thru a silage cutter to make it pack well and feed out easily. Where it is partially cured out it should be cut in with the dew on or some water should be added as it goes into the silo.

TROUBLE IN MILKER TUBES

Milking machine cleaning trouble sometimes lies in faulty placing of the rubber tubes and teat cups in the sterilizing solution. They should be so placed in the jar or crock that no air will be trapped in the tubes. The solution which is to prevent the growth of bacteria should touch all the inside wall of the milk tubes and connections, and for this a large crock is necessary—20 gallons at least and better 30 gallons for three sets of tubes. When letting the tubes down into the solution, one should not lap or double them up but hold them by one end, keeping them straight and letting them down into the solution slowly.

A way to make sure that all air is excluded is to remove the screw cap at the end of the claw, in cases where this cap is without an air opening, as this allows the sterilizing solution to reach the small passages and turns in the claw connections. Success in keeping the milking machine clean need not mean a lot of extra labor. In fact, workers in rural engineering at the New York College of Agriculture think that many farmers who complain about the bother of producing a satisfactory quality of milk by machines are spending more time than they need to properly clean them.

Not many [illegible] home gardeners this year will [illegible] any time on [illegible] novelties. Staple vegetables are good enough.



Extra Help and High Wages, or—

THE old way of cutting corn by hand was the nightmare of the farmer. It meant a big force of men, a big expense and gruelling, slow, irksome work. It was not always possible to get the men needed. But times have changed. The old way has stepped aside for the new, better, easier way.

McCormick and Deering Corn Binders cut the corn swiftly and neatly when the sweet, nutritious juices which make the fodder palatable are still in stalks and blades.

McCormick and Deering corn binders are clean-built, sturdy, compact and easy running. They have sufficient traction to operate successfully in the loose ground in the cornfield, and cut readily the toughest-fibered cornstalk. One of these machines drawn by a tractor or three good horses, a two-man outfit, will harvest from five to seven acres a day, cutting and binding the whole crop in neat, convenient bundles.

The many unusual features of these machines that are responsible for their time and labor-saving qualities will be shown you by a nearby International dealer, or you can get full information by writing the address below.

The Full Line of International Harvester Quality Machines

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Binders Push Binders
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Cream Separators

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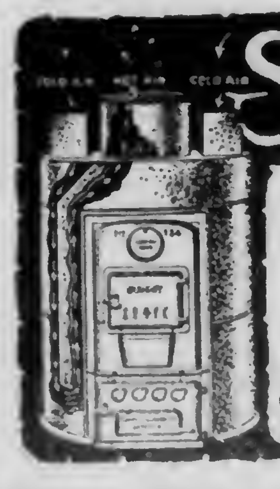

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HORTICULTURE

CICADA (17-YEAR LOCUST) EXPERIENCE

By J. P. STEWART.

In the regions affected, one of the most important horticultural events of the current season has been the onset of the cicada or 17-year locust. Our previous notes on this insect have been confined to predictions of their coming and suggestions for their control especially on young trees. In the present discussion we can record some real experience with the present brood and with the protective measures recommended.

In the first place, let us state that the current visitation of brood 10, as this brood is officially known, has come fully up to expectations in point of numbers. This is true in the wooded sections of Southern Pennsylvania at any rate. It was expected to be a large visitation, as brood 10 is one of the largest on record. The encroachments of civilization were expected to reduce its numbers, however, so that it would not be as serious in its effects as heretofore. This expectation has not been fulfilled in the section named above, and the amount of damage to unprotected fruit trees of all ages has been rather more serious than was expected by the writer at least.

In the section named the cicadas began emerging from their 17-year incubation underground about the 25th of May. They reached their height about June 10 to 15, and were started definitely on their decline by the 20th of the same month, tho their "stinging" or egg-laying operations were by no means ended by that date. In many places, they seemed to prefer the wood of young apple and peach trees to anything else they could find. This was especially true of those sections where very recent forest fires had killed the young natural growth. In such sections, the insects swarmed out over the adjacent orchards in veritable clouds, and in many cases piereced wood of the third and fourth season's growth with repeated lines of eggs, and left scarcely a twig younger than that untouched. Many an apple and peach twig bearing fruit was so severely stung back of the point of attachment of the fruit that the whole twig was broken off by its own weight, and the writer observed one 10-year-old Jonathan tree on the edge of a burned-over woods, so severely stung as to practically destroy its crop and even jeopardize the life of the tree.

There was evidently no ordinary method of protection available for such trees as that, but the protection previously suggested for young trees of 0 to 2 or 3 years proved very efficient, while unprotected trees of similar age were practically ruined in many cases. The protection used consisted of newspaper wrapping up to the branches, and a complete covering of cheese-cloth above that. The cheese-cloth was much cheaper than ordinary mosquito bar and was about as good, altho it became torn or ripped by the winds and growth of the tree rather more readily, and wherever an opening of any kind appeared, some cicada was sure to fint it and begin her operations. The cloth to cover 250 trees cost but a trifle over 3 cents for each tree, and it practically saved the life of the entire lot. The labor cost of course was fully as much, and the removal of the protectors is still to be done, but the covering was evidently very distinctly worth while.

Several interesting habits of the insects appeared, among which may be mentioned their habit of coming down the trees at night and collecting in large number near the tree bases, both in the evenings and mornings. This made a very convenient opportunity for their attack, especially on the part of the pigs and poultry, and both of them were very prompt in taking advantage of the situation. In one orchard where pigs were running, they beat regular paths from one tree to the next in their effort to keep the cicada population in check so far as possible and incidentally to improve their own protein supply. In this particular orchard, the pigs proved a very substantial aid in reducing the injury from this pest.

This New Jersey Trucker Delivers His Produce Quickly and Safely

The eggs will probably begin hatching about the middle of July, and it is important to know whether the young insects will find the exotic roots of the peach and apple a satisfactory host, and if so whether their 17-year feed, in the large numbers apparently in sight, will develop any permanently retarding effects on the general performance of the trees It is evidently preferable to keep them off the roots so far as possible, but it is difficult to devise any practicable way of doing this.

One could go thru the orchard and clip off and burn all the twigs that have broken partly off as a result of the stinging, but this would leave myriads of eggs in the twigs that are still unbroken and hence would probably prove of little value. Vigorous surface cultivation from mid-July to about the middle of August would probably kill a large percentage of them before they get well located in the ground and hence may be the most satisfactory means of combatting them, wherever such a period of tillage is practicable and safe.

Any definite experience which any of our readers may have on the need for protective measures against the underground action of the young cicadas, and also on the best means of accomplishing the protection desired will doubtless be appreciated by those now in the infested territory.

Incidentally, we might say that we have seen no evidence of any injury to the poultry, either small chickens or large, from unrestricted feeding on the adult cicadas, and the opportunity for an overdose was certainly present this year. This is of interest in view of the warning that came out on this line recently from certain official quarters. Further experience and observations along this line may also be of interest.

TIMELY TRUCK NOTES

By R. W. DeBAUN.

Vegetables Need Rain

A very severe drought is checking the growth of the truck crops (last part of June.) The soil is hard and dusty so that the early potato crop especially is being injured everywhere. Local showers in a few instances have helped for a few days at a time but when the soil is completely dried out, it takes a heavy rain to soak deeply into it.

The drought has already reduced the yield of early crops such as strawberries, cabbage, peas, lettuce, etc. The canhouses have canned very little rhubarb because there is very little ready to be pulled. The early pullings sold well for immediate use and the dry weather has prevented the production of a desirable pulling for the canneries. Unless rain comes soon there will be great reductions in the yield of other crops such as early tomatoes, onions, sugar corn, beans, etc. One consolation is that it is a good time to make hay. Some farmers believe that it brings rain to mow the big meadow.

Weeding Onion Sets

The thickly planted onions from seed for the production of sets are growing beautifully and they look to be free from weeds and grass. However, when we go into them we find that they are many weeds such as narrow leaf plantin, caterpillar grass, rag weed, mouse eared chickweed, clover, etc. If this material was left to grow it would be almost impossible to gather the sets; therefore, we have been busy today getting out the trash. The best tool for the work seems to be a little knife such as the housewife would use in peeling potatoes. When using the knife to get out weeds near onions, the workers are instructed to place the knife between the weeds and onions and cut downwards and away from the onion.

Save Seed Early in Bearing Season

Now is the time to think about saving the early tomato seed for next year's plantings. It is definitely known that all tomatoes formerly came from quite worthless stock and that all varieties and strains have an inherited tendency to go back to the original kinds Therefore, unless the tomatoes for seed purposes are carefully selected from the most desirable plants, the stock will deteriorate every year.

It is firmly believed that the tomatoes which are the first to ripen contain the strongest seed. Plants grown from seed selected early in the season will bear an earlier and heavier crop than seed saved late in the bearing season. This same principle holds true for such crops as peppers, cantaloupes, eggplants, etc.

NOTES FROM A MARYLAND GARDEN

Down here in Southern Maryland where the vegetable crops are not irrigated they look as tho they have concluded that life is not worth living. We have had but one light rain since the tenth of May, while the Baltimore papers say the rainfall for June has been above the normal. One can turn no moisture in the soil a foot deep. How any plants live is a mystery. I have the Skinner irrigation system over part of my garden and the difference between this part and the non-irrigated part is wonderful.

I set two patches of tomato plants early. One lot was set under the irrigating pipe and has been trained to stakes with a single stem. These plants are carrying 15 to 20 tomatoes and still growing and blooming. The other lot of exactly same age and treatment was planted beyond the irrigating pipe and not trained. They are not half the size now that the others are and have only a few small green tomatoes. I pulled the first red tomato on the 19th of June from the irrigated plants.

The strawberry crop was very short. The weevil destroyed many blossoms and the frost killed more. Those who had berries got a very fine price. The lowest price for 32 quart crate was $6 and the highest $11.50 at the car. And yet a city man in a Philadelphia morning paper told the people that the price was high because the canners were buying up the berries to make syrup for the soda water fountains. No one could afford to make syrup of strawberries at the price they sold for this season.

Plans were made for a greatly inscreased area in sweet potatoes but the drought has cut this short for no matter if the plants are set with the watering machine as most of them are, the watering at setting will not last long and the plants are dying by the thousand daily. It looks as tho the high price for sweet potatoes will keep up.

Early Dewberries and Early Harvest blackberries are on the market. My plants of the Nanticoke blackberry are loaded with green fruit and will not turn color for more than a month yet. It is a pity that this fine late berry will not ship for it is of fine quality, but it gets soft as soon as ripe. It is a tremendous grower and the great canes are armed with the fiercest of hooked thorns. Last summer I was sick and failed to get the canes stopped at the right height, and an old man I had taking out the old canes after fruiting let the new ones remaining full length so that I have some now nearly ten feet high and it looks as tho we will have to use a step ladder to get the berries.

I have another late berry, a trailing dewberry called the Atlantic. This, too, is a rank grower and has beautifully cut leaves. So far, the fruit is small and poor, and if they do no better this summer they will be rooted out in spite of their pretty leaves. This berry runs to September.

A man in Oregon sent me some plants which he claims to be a cross between blackberry and raspberry. I rather suspect that it is simply the same as the Loganberry, which was claimed to be the same cross, but has since been determined to be a pure blackberry of a reddish color, native to the Pacific coast. I have grown the Logan berry and it certainly is fine, but it makes too small a crop to pay for the room it takes. Few native fruits of the Pacific side do well here. I have planted the Oregon berries and another season may have the fruit. In our hot, sandy soil red currants do not live long. I am now run down to three bushes and one of these looks as tho this year will be its last. One has to be continually rooting more currant cuttings if one keeps up a supply of this fruit.

The drought has shortened the early Irish potato crop very seriously. The plants set plenty of potatoes but they simply stopped growing top and bottom for lack of moisture. The price for first class potatoes will probably continue high. There are some heavy heads of the Copenhagen Market cabbage on the market, but the small early Wakefields sell better since one is enough for most families. With no signs of rain, it is hard to see what any crop will do now.—W. F. Massey, Wicomico Co., Md.

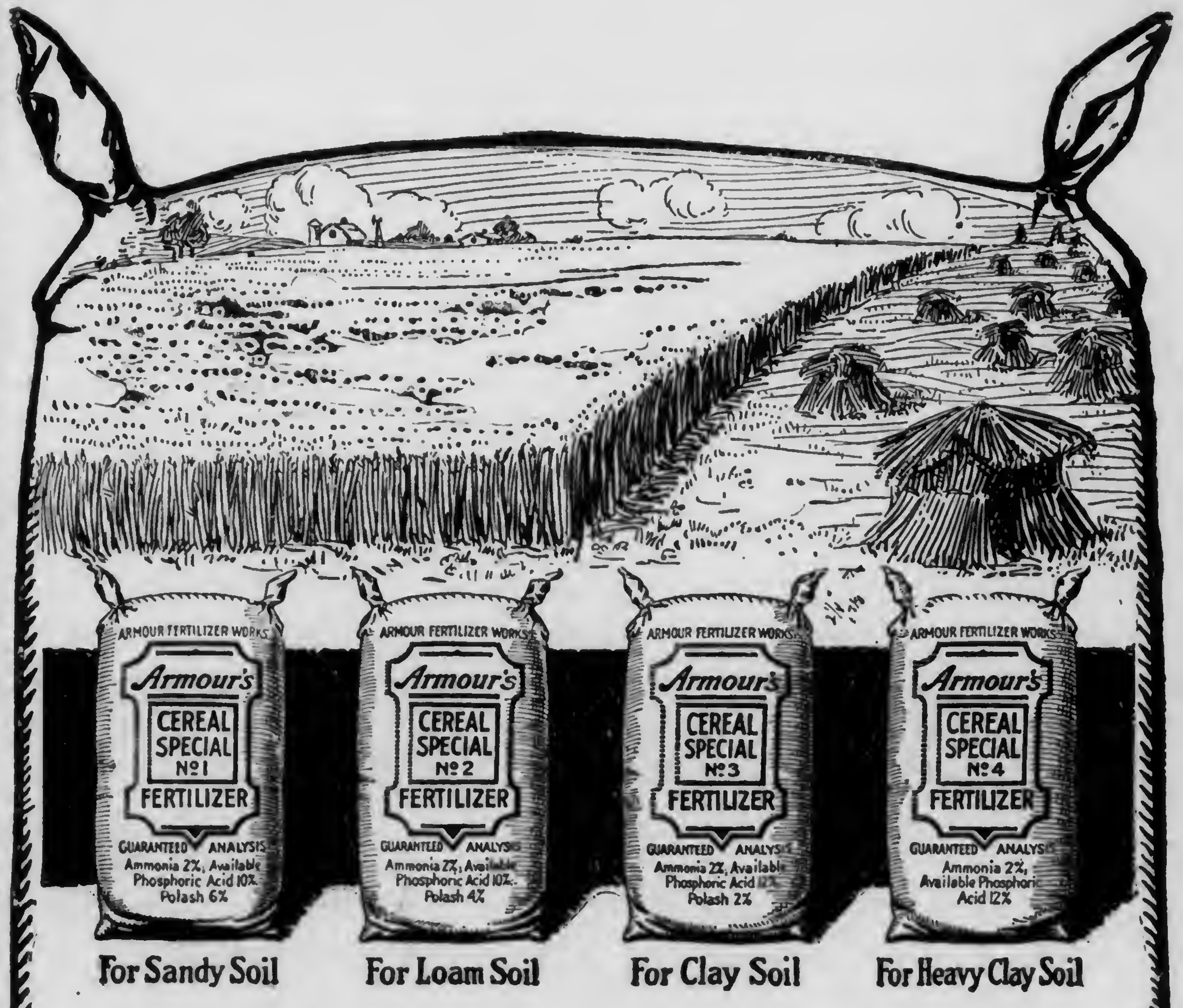
BIG RETURNS FROM STRAWBERRIES

Because of the unprecedented demand for strawberries for flavor for soda water, high prices were obtained thruout the season The state's strawberry growers did a wonderful business, and big prices are predicted for raspberries, blackberries, peaches and other fruits. Strawberries in great quantities were packed in barrels, placed in cold storage to be pressed into sirup later in the season.

Eastern Shore farmers did a big business and are enlarging their strawberry fields, where there were six acres, they are doubled or tripled. Acreage this year was below normal because war conditions last year caused poor express service, and discouraged growers plowed up their berry plots.

A Carolina County farmer collected $14,000 gross receipts from this fruit and netted $1,500, all from a 12 acre lot. On three acres a colored trucker of Wicomico County cleared $1,700 which he placed in bank. From a two acre lot another Eastern Shoreman cleared $2,000. When a man in this community (Woodlawn) brought home $250 for a wagon load of berries, it is easy to believe how money could pile up.—Marylander.

Home gardens fit in with any -gram of better farming and better home making.



For Sandy Soil — For Loam Soil — For Clay Soil — For Heavy Clay Soil

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BE sure you have the right fertilizer for wheat this Fall. Feed your wheat crop just the plant food that it needs and what the soil lacks. Too much of one element and not enough of another is wasted plant food and results in lower yields.

Feed your wheat right. Armour's Cereal Special Fertilizers fill every wheat need—quickly available ammonia to give the young plant a good start and a strong, healthy root growth before Winter — sturdy, vigorous plants that are ready to grow as soon as the ground warms up. Two per cent of ammonia is enough. It is not practical to use less than two per cent of ammonia and not necessary to use more. Enough phosphoric acid to strengthen the straw, fill out the grain and ripen the crop early. Sufficient potash to help the phosphoric acid fill out the grain and make it plump and heavy. ***You pay the thresher by the bushel, but you sell by the weight.***

Armour's
Cereal Special
Fertilizers

supply the right balance of plant food to grow the most wheat at the least cost per bushel. They eliminate guesswork and waste. The formula is right—the materials are the best that can be had, and only those suited to the special needs of the wheat crop are used. They cut the cost of production and make bigger wheat profits certain.

Choose the Fertilizer That Suits Your Soil

On sandy soils—use Armour's Cereal Special Fertilizer No. 1—2-10-6.
On loam soils—use Armour's Cereal Special Fertilizer No. 2—2-10-4.
On Clay soils—use Armour's Cereal Special Fertilizer No. 3—2-12-2.
If you have a heavy clay soil which you know can supply the necessary potash use Armour's Cereal Special Fertilizer No. 4—2-12-0.

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Armour's Cereal Special Fertilizers are concentrated to the highest practical point, so that the plant food cost will be as low as possible. They are made with the best materials adapted to the special needs of the wheat crop; they are manufactured by the latest and most efficient methods, in modern factories, under the supervision of trained men.

Get Your Fertilizer Early

See our local sales agent NOW; have him reserve your Fall requirements. Ask him for a copy of our booklet, "Turning Fertilizer Dollars into Wheat Dollars," or write direct to our nearest office. Don't delay — wheat seeding time will soon be here.

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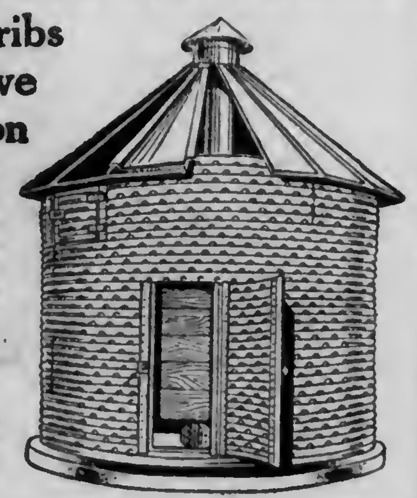

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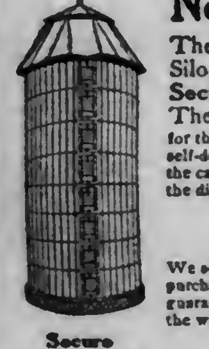

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In order to outwit the Hessian fly, wheat should be planted late. The Nitrogen in Dempwolf's Fertilizers enables you to plant late, for it gives the plant a quick start even in cold ground, and enables the crop to resist the ravages of the fly.

Write for full information about Dempwolf's Fertilizers in analyses to suit different soils and crops. We have facilities for prompt shipments, with no congested railway yards nearby. We urge, however, that your order be placed early.

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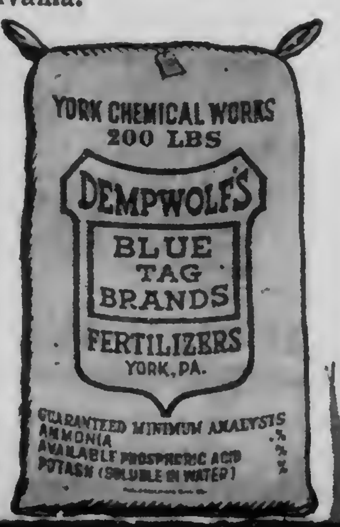


POULTRY

ARTIFICIAL LIGHTING FOR HENS

Discoveries in the last few years in the use of artificial lighting in poultry houses has enabled the poultry keeper to level the production of eggs thruout the entire year, instead of having the usual heavy laying period in spring and few eggs in fall and early winter. The hens not only maintain a large laying percentage when eggs bring high prices, but they lay more eggs than normally because artificial lighting enables them to handle the feed to better advantage.

The poultry department at the New York State College of Agriculture at Cornell University has given much attention to the subject of artificial lighting in hen houses. In a recent address Professor James E. Rice, of the Cornell poultry department, said the principle upon which artificial lighting is based was very simple.

Good Stock Increases Pride and Profits

Hens are natives of the tropics. They originated in a region where the days and nights are twelve hours each. They have a digestive tract of twelve hours' capacity.

When the hen was removed from her natural twelve-hour day environment she merely adapted herself to the change but did not alter her digestive system. When the shorter days of late fall come she stops laying. She hibernates like the woodchuck. She eats less, is less active and less productive. Just as soon as the equal days come in March high egg production is reached.

When hens are in condition the poultry keeper can get eggs just as well in the fall and early winter as in spring, if they are fed exactly twelve hours apart every day in the year, and have ample time to eat the feed before going onto the roost. Professor Rice has the results of several practical tests to prove this statement.

In the experiments two years ago the lights were turned on the 28th day of November from twilight until nine o'clock, and this was continued until March 21st, after which time artificial lighting is considered to be not necessary. In these experiments little dim lights were an aggravation. They were no better than normal daylight. With lights of the proper size, egg production was heavy in season of high prices, and the yearly production per hen was considerably increased. There was an increase in egg production of from 22 to 33 percent the first month.

In 1918, illumination was started on November 4, and was continued until March 24, 1919. In one of these experiments in early winter after the lights had been on for some time, they were turned off for a week and egg production went down from 32 percent to no eggs at all. The lights were turned on and production went up again. In one instance, a man with 2,000 hens paid the entire cost of a small lighting system from the profits on one months' egg production due to the artificial lights.

Farmers with small flocks are using various kinds of lights from kerosene lanterns and gasoline lamps to electric lights. The light can be hung in the poultry house night and morning, and will cost but little. A reflector is needed to reflect the light to the floor. This can be made from a piece of tin. One farmer made a net gain of 130 dozen eggs in a year from 100 hens, and the cost of illuminating for 100 hens need not be over $3 to $5 a year.

It has been found, according to Professor Rice, that it requires but little if any more feed to produce eggs by artificial illumination than in the old way. Sixty-five percent of the egg is water, and the profit comes not so much from increased annual egg production as from the larger number of eggs that are laid when prices are high.

The secret of artificial lighting is that hens lay best when the nights and days are of equal length, and the poultry man who lights his henhouse in fall and winter with this point in view will obtain the most satisfactory results, because his system is based on the natural requirements of the hen.—E. E. R.

WHEAT SHEAVES FOR HENS

This is the time of year when the hens begin to slacken in their laying. Various causes may be assigned for this. One of these is the excessive heat which affects them as well as people and instead of being busy gathering egg-making materials, they spend much of the time sitting about in the shade. This, too, is the natural time for them to hatch, and hens which may set only once or twice a year usually do so during the hottest weather.

Last winter being so very mild, many hens either laid all the time, or at least started two months sooner than they otherwise would have done. This naturally results in fewer eggs at this time of year.

For a number of years I have given my laying hens sheaves of wheat with very good results. As soon as the wheat is cut and dry, I scatter about in the shade of trees or in the steer shed or sheaf to about thirty hens once a day. It all depends upon the English sparrow. There are places to which this bird is afraid to go and there I place the unthreshed grain.

In a few days a marked improvement in the condition of the hens can be seen. There combs usually are pale and they appear listless and lay very poorly but from now on they will again regain all their former beauty of comb and feathers and lay very well for two or three months more. Indeed, their combs are redder and the eggs are larger than at any other time of the year. The price of eggs, too, is getting higher every week as fall approaches and the extra time and work is very profitably spent.

Many hens lay about fifty percent as many eggs just now as they did in early spring and I am positive that if they are given sheaves of wheat they will lay almost, if not altogether, as good as they did earlier in the year.—R. I. W.

A $100 CHICK LESSON

The largest poultryman in this part of the county had an experience which he is not likely to forget so long as he remains in the chicken business. About a week ago he had six hundred three-weeks old chicks that went on a "hunger strike," as he called it, and as a result he lost a large percent of them. These chicks had been fed a commercial, ready-mixed ration and when they were the age I mentioned, their feed ran out and no amount of coaxing could get them to eat any other kind of food in sufficient quantities. They would wander about or stand in huddled disconsolate groups until they became too weak even to do that, then they would keel over and die.

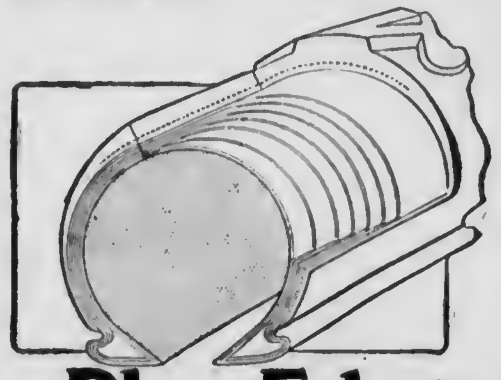
Their owner was at his wits end. The kind of feed he had been giving them happened to be entirely out of stock. Finally, after a week of searching, he got some of this feed in a neighboring state. This was hastily shipped to his home and the chicks were satisfied. They recognized their old grub and speedily filled up and the mortality among them abated at once. However, during the "hunger strike" many dozens of them died. Since they were of a fine white leghorn strain, famous as good layers, the loss was considerable because no more eggs of this same kind are available during the remainder of this season.

Other very young animals have been known to act in a similar way. The moral for all poultry raisers is to keep or get enough feed to last the chicks until they have passed thru this period of their existence. Had they been several weeks older when the feed ran out, this would not have happened.—R. I. W.

Note by Editors.—Have other readers known of similar cases? We are wondering whether the trouble was caused by the feed being exceptionally good in quality, or was it so poor as to cause them to suffer from mal nutrition.

Chickens will not give adequate returns in eggs or growth when kept under insanitary conditions.

Most troubles are best eliminated at the SOURCE. Bad roads are the SOURCE of much UNNECESSARY tire expense. ARE YOU BOOSTING GOOD ROADS?



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Mohawk tires contain an extra ply of standard weight fabric—a ply that other makers do not think it necessary to use.

So we believe in building tires—not only the treads that show, but the parts underneath that do not show—with the greatest amount of strength it is possible to give them.

You may find another tire with a so-called extra ply. But you will find no other tire with as many plies of 17¼ ounce pure Sea Island Cotton fabric, as the Mohawk tire contains.

It is better quality throughout—only pure materials—more generous quantities of these—the fact that Mohawks are hand-made—that enables us to dare tell you that tire building today is not a question of secrets or special processes, but of *quality* alone.

And it is this *quality* alone that gives the Mohawk tire a *permanent* clientele. Just ask yourself—what automobile owner whom you know buys only *one* make of tire, *always?* Mohawk buyers *do.*

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ORGANDY COLLAR AND CUFFS WITH FILET INSERTS

When purchased at the shops hand-made sets are a luxury, but this need not trouble the girl who is handy with her needle, for the organdy set shown here is both inexpensive and in excellent taste. One half yard of organdy will make two sets. They can be cut different shapes, and one may be daintily embroidered in white or color, and the other set trimmed in filet crochet as illustrated.

After cutting the collar and cuffs, face back to form 1½-inch hems, which are then machine hemstitched. For the crochet work use No. 70 crochet cotton, or finer if desired, the idea being to make the set as dainty as desired.

(Abbreviations.—Dc, double crochet; sc, single chochet; ch, chain stitch; st, stitch; sp means a space made thus: 1 dc, 2 chain stitches, then 1 dc in third stitch from preceding dc; gr means a group consisting of four dc made in successive stitches, then for each additional gr add 3 dc, thus 2 gr contains 7 dc, 3 gr contains 10 dc, etc.)

For the inserts for the collar, start with 53 chain stitches.

1st Row.—At end of the chain turn and, starting with dc in sixth st from end of chain, make 16 sp, then 5 ch and turn.

2nd Row.—4 Sp, 2 gr; 3 sp, 1 gr; 3 sp, 2 gr; 1 sp, 5 ch, turn.

3rd Row.—1 Sp, 2 gr; 3 sp, 1 gr; 3 sp, 2 gr; 4 sp, 5 ch, turn.

4th Row.—1 Sp, 2 gr; 3 sp, 1 gr; 2 sp, 1 gr; 2 sp, 1 gr; 3 sp, 5 ch, turn.

5th Row.—4 Sp, 5 gr; 4 sp, 2 gr; 1 sp, 5 ch, turn.

6th Row.—7 Sp, 1 gr; 3 sp, 1 gr; 4 sp, 5 ch, turn.

7th Row.—1 Sp, 4 gr; 1 sp, 1 gr; 1 sp, 4 gr; 4 sp, 5 ch, turn.

8th Row.—7 Sp, 1 gr; 3 sp, 1 gr; 4 sp, 5 ch, turn.

9th Row.—4 Sp, 5 gr; 2 sp, 5 ch, turn. This drops 5 sp.

10th Row.—4 Sp, 1 gr; 2 sp, 1 gr; 3 sp, 5 ch, turn.

11th Row.—1 Sp, 2 gr; 3 sp, 1 gr, 4 sp; then slip-stitched back on 3 sp, 5 ch, turn.

12th Row.—1 Sp, 1 gr; 3 sp, 2 gr; 1 sp, 5 ch, turn.

13th Row.—4 Sp, 2 gr; 2 sp, 5 ch, turn.

14th Row.—2 Sp, 2 gr; 4 sp, 5 ch, turn.

15th Row.—8 Sp, then repeat for the next row, and break thread.

Repeat for the opposite insert. Sew these inserts in place, then cut away the material, and hem the edges down securely.

Edge.—*1 Dc into the hem, 2 ch, skip a space of the material the length of the 2 ch, then repeat from.* At the inserts make spaces over the corresponding spaces of the preceding row to the corner, then 5 ch, 1 dc into the same st at last dc, and continue sp around the collar, finishing with 3 ch at; turn.

2nd Row.—1 Sc into last dc, *3 ch, skip 1 sp; 1 dc over next sp, 5 ch to form a picot, 1 dc into the same sp; 3 ch, skip 1 sp, 1 sc into next dc. Repeat from* around the collar.

Insert for Cuff.—Start with 44 chain stitches.

1st Row.—4 Sp, 1 gr; 3 sp, 1 gr; 3 sp, 1 gr; 5 ch, turn.

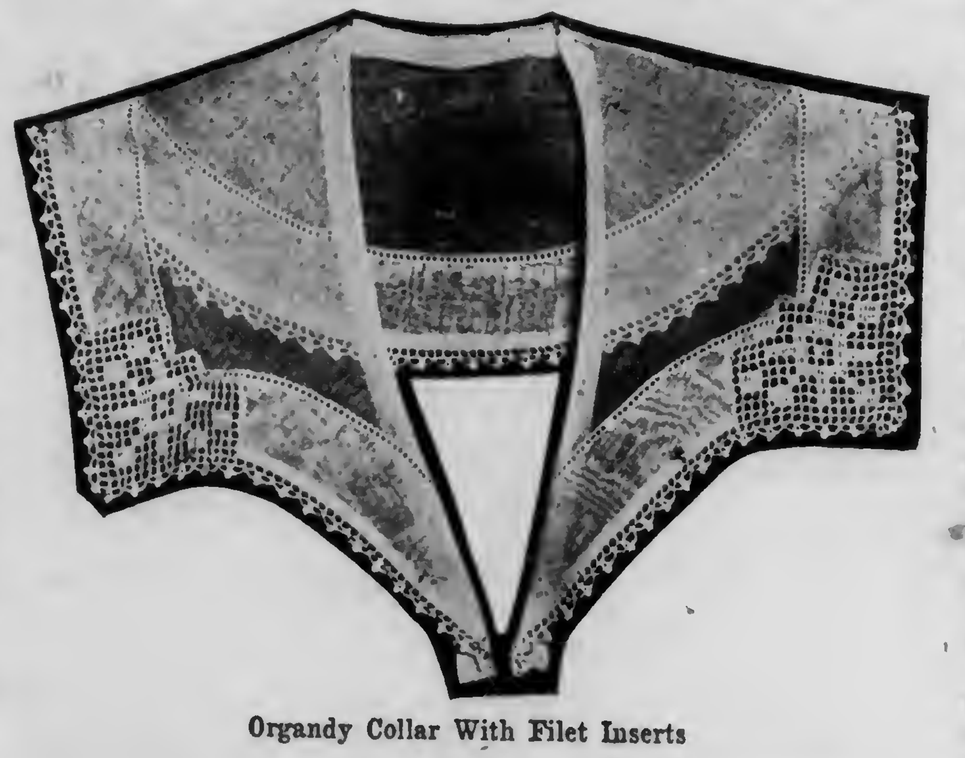
2nd Row.—1 Sp, 1 gr; 2 sp, 1 gr; 2 sp, 1 gr; 3 sp, 2 gr; 3 ch, turn.

3rd Row.—2 Gr, 4 sp; 5 gr, 2 sp, 5 ch, turn.

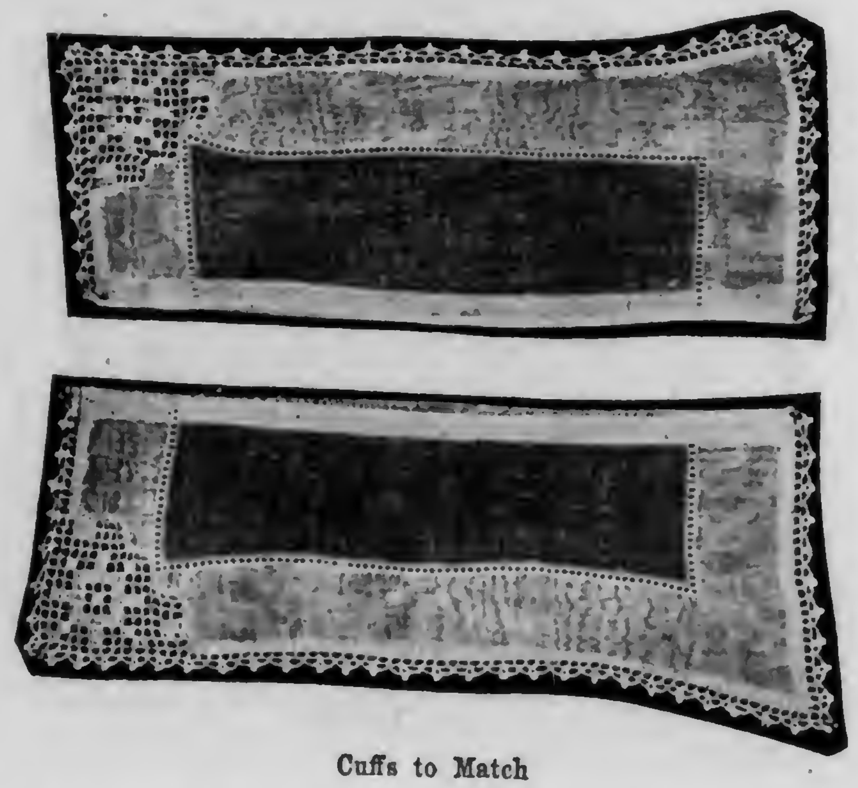
4th Row.—2 Sp, 1 gr; 3 sp, 1 gr; 6 sp, 5 ch, turn.

5th Row.—4 Sp, 3 gr; 1 sp, 1 gr; 1 sp, 3 gr; 5 ch, turn.

6th Row.—2 Sp, 1 gr; 3 sp, 1 gr; 3 sp, 5 ch, turn.



Organdy Collar With Filet Inserts



Cuffs to Match

7th Row.—3 Sp, 5 gr; 2 sp, 5 ch, turn.

8th Row.—1 Sp, 1 gr; 2 sp, 1 gr; 2 sp, 1 gr; 2 sp, 5 ch, turn.

9th Row.—5 Sp, 1 gr; 4 sp, 5 ch. turn.

10th Row.—7 Sp, 5 ch, turn.

11th Row.—4 Sp, 2 gr; 1 sp, 5 ch, turn.

12th Row.—1 Sp, 2 gr; 4 sp, break thread.

Make three more similar inserts and sew one on each corner of the cuffs, finishing the same as the collar corners.—Helen Kaufman.

WITH NEW FOODS FROM THE GARDEN

Corn Fritters.—One cupful of corn, 1 teaspoon salt, 1 heaping cup flour, 1 egg, a few grains of red pepper, 1 tablespoon olive oil, ½ cup milk. Beat the egg well, add the remaining ingredients, drop by spoonfuls into smoking hot fat and fry 8 minutes; drain and serve hot.

Tomato Croquettes.—Cook 1 quart of tomatoes till they are reduced to 1 pint. Add to them then 1 pint of fine bread crumbs with salt, pepper and 2 tablespoons melted butter and a little sugar. Set away to cool. Then shape into croquettes, roll in flour of fine crumbs, and drop into boiling fat. Some desire a sauce with them, but they are delicious without.

Cucumber Fritters. — Peel and grate 3 cucumbers, then turn them into a sieve, press out and discard all the juice. To 1 pint of the pulp, add ½ cup rich milk, 1 cup flour, 1 tablespoon white pepper and 3 well beaten eggs. Drop by spoonfuls into smoking hot fat and fry until crisp and brown.

Beet Jelly.—Cut enough boiled beets to make 3 cupfuls. To this add 2 tablespoons prepared horseradish, 1 tablespoon vinegar and 1 cup water. Let this boil 5 minutes, remove from fire and add ¼ teaspoon salt and ½ box of gelatin dissolved in cold water. Pour this into a shallow dish, and when cold cut into squares.

Cream of Tomato Soup.—Cook 1 quart tomatoes with 1 pint water until done, and strain thru a sieve. Boil 1 pint cream, drop in some finely chopped celery, and parsley and season with salt and pepper. Just before ready to serve stir the strained tomatoes into the cream, stirring constantly. Adding a pinch of soda to the tomatoes before adding them to the cream will prevent curdling of the mixture. Serve at once. If soup stock is convenient use that instead of water.

Corn Chowder.—Cut the kernels from 12 ears of green corn, peel and mince 2 onions and fry them brown in 3 tablespoons butter in a deep saucepan. Now put in the corn, 4 broken biscuits and 6 parboiled and sliced potatoes. Season with pepper, salt and 1 tablespoon minced parsley; cover with 1 quart of boiling water and let all cook gently 45 minutes, then stir in slowly 1 cup boiling milk thickened with 1 tablespoon flour rubbed into 1 tablespoon butter. Turn into a heated tureen to serve.

Cucumber Jelly.—Boil together 4 medium-sized cucumbers, peeled and cut into small pieces, 1 red pepper or 8 peppercorns, 4 cloves, 1 sprig of mace, 1 slice of onion and 3 cups hot water. Let this boil down half. Remove from the fire, add 2 tablespoons vinegar and ⅓ box of gelatin dissolved in ⅓ cup cold water. Add a little green vegetable coloring, strain at once and pour into molds.

Stewed Beets in Sauce.—Bake 2 large beets in the oven until tender. Cool in cold water, remove the skin, and cut them into slices. Put them in a saucepan, pour over a little vinegar and some stock or gravy. Simmer gently ½ hour, pour off the gravy and reduce it to a glaze, add a few slices of beet, well pounded, and 2 tablespoons of the brown sauce. Boil for a few minutes, mix these with the diced beets, heat very carefully, dish up, granish with fried bread strips and serve.

Carrot Soup.—Some carrots, two slices of onion, a sprig of parsley, ½ cup rice, 4 tablespoons butter, 1½ teaspoons salt, a few grains of red pepper, 2 cups water, 2 cups scladed milk, and 2 tablespoons flour. Chop enough carrots to make 2 cupfuls, cook in water until tender, press thru sieve, reserving the liquor. Cook rice in milk in double boiler. Cook onion in butter, add flour and seasonings. Mix the carrot mixture with the rice and milk, pour into the onion and flour; bring to the boiling point, strain and serve. Garnish with chopped parsley. If this soup seems a little thick, thin with cream.

Stewed Peas and Eggs.—One tablespoon salad oil, ½ peck peas, one small onion, ½ cup boiling water, 2 lumps sugar, a little fresh mint, 3 eggs, salt and pepper to taste. Fry the onion, sliced, in the oil, with the salt and pepper. Pick the peas over carefully, wash and drain them, add to oil and onion, the water, sugar, peas and mint. Cook till peas are very tender; break the eggs into a cup, and slip them carefully onto the peas. Cook until eggs are done.

String Bean Salad.—String and wash 1 pint fresh string beans, put them in cold salt water and boil until tender. Drain and when cold, put in a salad bowl, season with salt and pepper, pour ½ teaspoonful of salad oil over them, also ½ cup vinegar and serve. If prefered, the salad oil can be left out.

Green Peas.—Shell and wash young tender peas and put them in just enough boiling water to cover; if more water is needed add a small quantity of boiling water at a time so that when they are done there will not be any water to pour off. When done add butter, salt and pepper, a bit of sugar and a little flour to thicken if desired, also a little cream.

Creamed Carrots. — Scrape and wash enough carrots to make 4 cupfuls. Cut in dice, and put them in a double boiler containing half milk and half water at boiling point. Let them cook slowly 40 minutes or until tender, then drain them, and put them in a hot dish at side of stove. Use 1 cupful of the stock they were cooked in to make a sauce with 1 tablespoon butter, 1 tablespoon flour and plenty of salt and pepper. Pour the sauce over them to serve.

Cauliflower Au Gratin.—Trim outside leaves, soak in cold water about one hour, drain and tie it in a piece of chesecloth, drop it, stem down into a large kettle of boiling salted wated. Boil uncovered 30 minutes; be careful not to overcook cauliflower or it will become water soaked and lose its flavor and color. When tender, lift it out carefully, drain well and separate the flowerets. Arrange them neating in a baking dish, pour over them ½ pint of white sauce, dust thickly with grated cheese and brown in a quick oven.—Miss H. A. Lyman, Mass.

ALL KINDS OF SHORTCAKE

I send my recipe for all kinds of shortcake. It is very easy to make: One cup sweet milk, 1½ cups sugar, 1 egg, 1 teaspoon salt, 2 teaspoons baking powder. You can use sour milk and soda or sour or sweet cream. If milk is used, use shortening size of an egg. Bake in two layer cake tins If a half will answer for one meal, cut in two, then the other half can be steamed for another meal. Put filling of berries between and on top.

Johnny Cake (or Cornmeal Muffins if Baked in Gem Tins.) One cup sweet milk, ½ cup sour milk, ½ cup sugar, 1 teaspoon (level) soda, 1 cup flour, thicken with corn flour or meal as thick as stirred cake. Can add one egg and salt. Or you can use 1½ cups sour milk with soda, but it is not quite as good thus as made with sweet milk.—Mrs. S. R. Smith, Pa.

ODDS AND ENDS

A Sugar Saver.—Before lifting tomatoes for the meal, stir in a bit of soda; make them more palatable.

Lice Killer for Rose Bugs.—Lately I have learned that a good louse killer will eradicate the bugs on rose bushes, and have been told that it will kill those on currant bushes, also cabbage and garden pests in general. It is good to know, for have we not been tormented, especially with cabbage worms. Let us give this information a trial any way.

Red Poultry Lice Information Wanted.—Will the readers tell their experience with red lice in poultry-house and how to get rid of them? I found that on a hen (having left a nest) there were dozens. On examining the nest found it full. I turned the hen up and poured coal oil all over her. She survived and is around again.—Mrs. Mary Shuman, Pa.

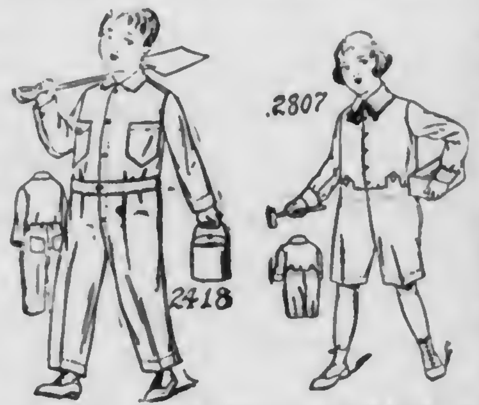
SAVING TIN CANS

It is interesting to learn that the government is going to try to profit by some of the thrift lessons forced upon us by our war experience. For instance it is considering ways and means of conserving some of the tin annually wasted in the 2,000,000,000 tin cans emptied every year by users of food, paint, oils, and every other commodity sold in tin cans. This number of cans contains about 8,000 tons of pure tin, most of which is now thrown onto dump heaps. The Waste Reclamation Service of the Federal Department of Commerce is investigating the possibility of an electric furnace for use in communities which could reclaim the tin from many of the cans now absolutely wasted. Some cities do have provisions for taking care of such reclamation. A machine cuts off the can tops and bottoms, then slits down the seam and presses the sheet out flat. These flat sheets are then used to make asbestos sheets, toys, box covers, etc. This is more economical than detinning the sides of the cans. But the tops and bottoms have to be detinned because there are few uses for them in the shape in which they are cut from the cans.

PENNSYLVANIA FARMER PATTERNS

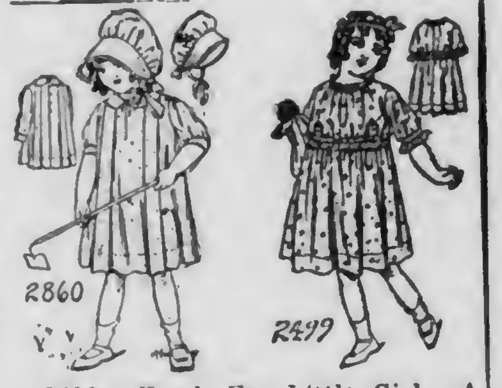
Give figures and letters of each pattern exactly as printed at beginning of each description or we will not be responsible for correct filling of orders. Give bust measure when ordering waist patterns, waist measure for skirt, and age for children's patterns. Address Pennsylvania Farmer, 261 S. Third Street, Philadelphia, Pa.

2418.—Play or Work Uniform.—Khaki, gingham, galatea, drill, cotton, corduroy and seersucker will make it. The trousers are cut in one with the front of the waist; at the back waist and trousers are separate. The garment is a comfortable "overall" model. The pattern is cut in 5 sizes: 4, 6, 8, 10 and 12 years. Size 10 will require 4 yards of 36 inch material. Pattern costs 10 cents.

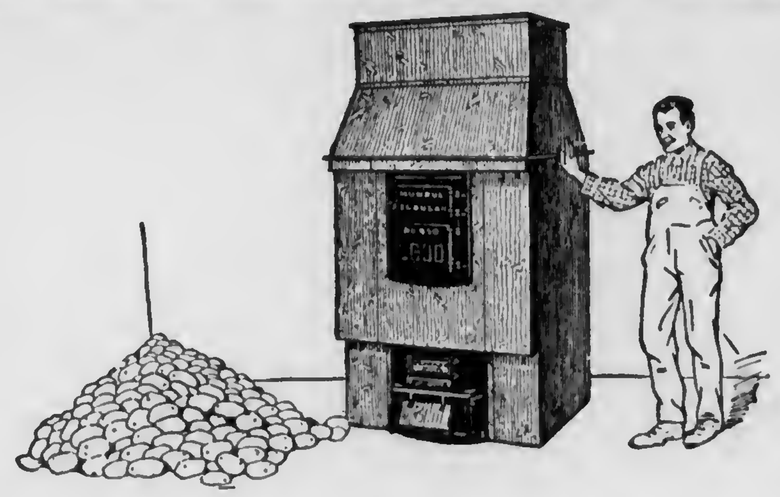


2807.—Boys' Suit.—Adaptable to all materials usually employed for boys suits. Wash fabrics such as khaki, drill, galatea and gingham, likewise flannel, serge, corduroy or velvet. The sleeve may be in wrist or elbow length. The pattern is cut in 5 sizes: 3, 4, 5, 6 and 8 years. Size 4 will require 2⅛ yards of 40-inch material. Pattern 10 cents.

2860.—Girl's Dress and Sun-Bonnet.—Here is a comfortable warm weather outfit which will please any little girl. Gingham, percale, seersucker, linen, drill, pique, or poplin could be used for both the bonnet and dress. With bloomers under this dress, petticoats may be dispensed with. Pattern is cut in 5 sizes: 2, 3, 4, 5 and 6 years. Size 4 requires 2¼ yards of 36-inch material for the dress and ¾ yard for the bonnet. Pattern, 10 cents.



2499.—Frock For Little Girl.—A good model for voile, batiste, dimity, lawn or Swiss. Waist and skirt are full and gathered. In silk, cashmere, challie or albatross, the style is also very attractive. Pattern is cut in 5 sizes: 2, 3, 4, 5 and 6 years. Size 4 will require 2¼ yards of 36-inch material. Pattern 10 cents.



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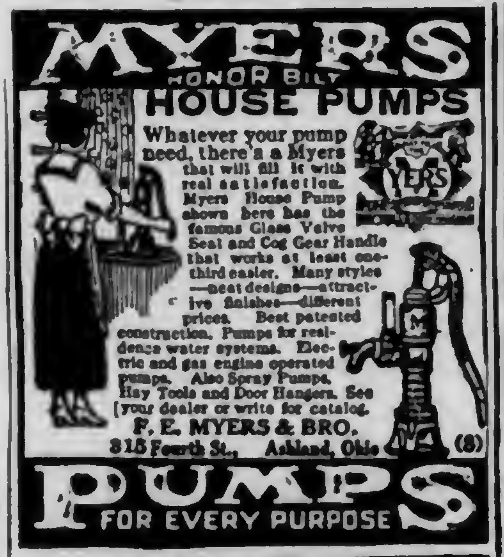

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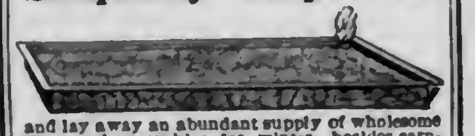

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Concrete for Permanence

FARMERS' WEEK AT PENNA. STATE COLLEGE

(Concluded from Page 2.)

fruit vanished from sight as tho by magic. Over in the Dairy Building, ice cream, cottage cheese, buttermilk and iced milk were sold at cost by the Commercial Dairy department. Something like 200 gallons of ice cream was dished into the little wooden platters each day and went to complete the general feeling of satisfaction and contentment.

Cows and Everything

At the dairy barn we saw long rows of clean, well-groomed, cud-chewing matrons who looked placidly at us as much as if to say, "Yes, here we are. We are profitable because of our breding, our comfortable quarters, our feed, and the care that is given us. Now go home and look at your cows in your barn and perhaps you can discover why your herd isn't returning much profit. Two members of this collection of valuable animals deserve special mention. The Holstein, Lilith Gem Kolkluff, produced 22.247 pounds of milk and 851 pounds of butter in 365 days. The Brown Swiss, Mary Dysart, just missed being record cow of the breed by a few pounds. She gave 14,497 pounds of milk and 616 pounds of butter fat in one year.

Evening Talks

Wednesday evening, in the beautiful outdoor amphitheatre, exercises were enjoyed under the cool and quiet of the trees and sky. A chorus of County Agricultural Advisors sang a number of original and highly pleasing songs and were uproarously received. Honorable Evin Jones, U. S. Congressman and a member of the Committee on Agriculture in the House of Representatives, spoke opposing the proposed Soldier Land Bill as it now stands. He said, "It is but the old Reclaimation Scheme for the worthless lands of the South and West, but put up in a new wrapper so people dare not oppose it. It takes the boy from his own state, county and locality with a vicious motive. We have resources of our own here in Pennsylvania sufficient to care for Pennsylvania soldier boys and we should use them, not send the boys to some state far from their homes."

The State Secretary of Agriculture, Mr. Rasmussen, outlined the future plans of the State Department, emphasized the need of frictionless cooperation between the farmer, the college and the Department, and assured the farmers of his undivided devotion to their interests.

Parsons Meet

During the past year a new department has been added to the School of Agriculture, called Rural Life. This department, working thru the rural, religions centers plans to promote recreational and educational activities, to better the living conditions of country dwellers and to make the young folks more satisfied with life on the farm. Rural ministers representing the several counties were present and will be in conference for some time, studying and talking over these important questions.

On new Beaver Field every evening at six, an hour was given over to play. Mass games of the type so successfully employed for our army proved to be most popular. These games are informal in nature, are not competitive, and may be participated in by any number. Swat The Kaiser, Over The Top, Taking The City Gates, Number Tag and many other army games are going to be popular around the old farm.

Was it all worth while? Ask anyone who was there. The idea of a summer farm conference was originated during the Winter Short Course, among some four or five hundred farmers in session at that time. Some doubt was expressed among the college authorities as to the advisability of holding such a conference during the summer when the farmers were so busy. But all doubt has now been dispelled. The affair has, by its own volition, become in the nature and classification of Annual, and already has shown itself to be an important factor in the amalgamation of the agricultural activities and interests so important to the future of Pennsylvania. "We are all coming back next year, sure."

FARMERS ON THE JOB

I want to commend your editorial in recent issue commenting on the President's message. In many respects I regard Mr. Wilson as a very strong, honest man. I cannot help but feel, however, that he has a number of men in his cabinet who are far from strong, and possibly not too honest. You cut Secretary Lane's crazy proposition to put ex-soldiers on farms about right.

Your attitude on the tariff as related to agricultural interests is splendid. If agriculture is not treated precisely as other interests are as regards raw materials, there will be a howl that will be heard far and wide. Never have the agricultural papers had a better opportunity than at the present to do an immense service. Big interests will grasp the earth if unchecked during the next few years. We farmers must stand by our guns like men to protect our interests or we will suffer. Parties must be made to understand that the farmer is on the job and will fight whoever refuses to do the right thing.—James E. McSparran, Lancaster Co., Pa.

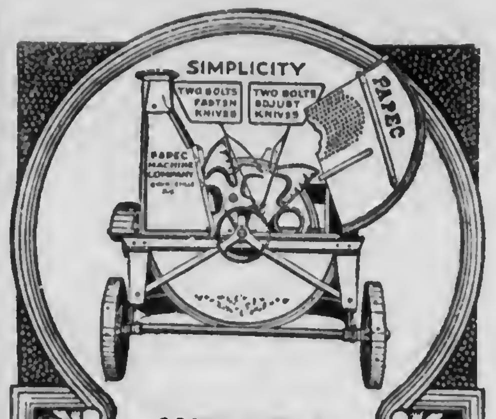
"HIDE SHORTAGE BECOMES ACUTE"

The above title is one used in the business section of a leading city newspaper. When I investigated the market for hides the best price obtainable was 10 cents per pound. Because they were scarce? No! What became of them?

Well they became "packers' hides" as soon as out of farmers' hands, and they became much more valuable for various unfounded reasons, even because of a law to that effect. Now they are worth, according to quotations on packers' hides, four times the farmers' price, and nobody but the packer has them. I am not familiar with the treatment a packer gives hides but it must be with a gold dust preparation. Then he tells the manufacturer of shoes to pass the cost along, and he surely does, with plenty added. But alas! alas! It is not gold in the shoes but often poorly prepared leather, cheap workmanship and nearly all price.

The city business man reads his newspaper and then exclaims, "What is the matter with the farmer? Hides worth half a dollar a pound and acutely scarce, and we are paying $10 or $15 a pair for shoes. Can't we ever get the farmers educated?"

Just wait, Mr. Non Producer, the farmers are organizing.—Wm. J. Watts, Clearfield Co., Pa.



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COUNTY NOTES

Mifflin Co., Pa., (C) June 17.—Weather warm and dry to 14th, when we had heavy rians, washing the fields and roads badly. Grass and wheat looking very good. Corn growing nicely, has been damaged some by the heavy rain. Winter-fed cattle all disposed of by farmers at top prices. Wheat, $2.25; corn, $1.75; oats, 70c; potatoes, $2; eggs, 40c; butter, 50c; cherries, 13c quart. Farmers working corn and making hay. Alfalfa mostly made. Many farmers have been out of hay, and the price, $35 and $40 ton made costly feed.—J. H. Byler.

Carbon Co., Pa., (SE) June 13.—Weather at present is very unsettled; foggy every day and quite a few thunder showers. Corn all planted about two weeks ago and looks good. Rye and wheat will be 100 percent crops. Most all potatoes up and growing fast. Oats looking fine. Potatoes are $2 per bu.; wheat, government price; rye, $1.50; eggs, 55c per dozen; butter, 65c. Not many cattle kept here at present. Milk is 8 to 9c per quart at the farm. No potato wart found in this valley altho it is established in the adjoining townships which were put under quarantine. Most of the potatoes grown here shipped early this spring at low prices. A large acreage planted this spring. Wages $30 to $38 per month and board. Help scarce. —Walter S. Bittner.

Lebanon Co., Pa., (SE) June 23.—Weather is fair and seasonable with occasional thunder showers. Wheat is ripening rapidly and will be a bumper crop. Oats are doing well. Some farmers had trouble with cut worms eating off their corn, otherwise the corn looks good. Haying has just commenced and will show a fair crop. Most of it will be loaded with hay-loaders this year. Potatoes are not doing so well as expected and bugs are plentiful. Tobacco is practically all planted. Quite a few of us from this section went to State College to attend the summer Farmers' Week. All made the trip by automobile. Some of our farmers lost heavily in steers this year when the price dropped from 18 to 13 cents. Eggs are 40 cents; broilers, 35c; chickens, 32c; strawberries, 15 cents box; cherries 15 cents quart; corn, $1.80; oats, 90 cents; old potatoes, $2.25 bu. Hogs have advanced to 24 cents live weight.—L. F. Strickler.

MONEY IN SUMAC

The U. S. Department of Agriculture calls attention to the growing demand for American sumac for use of tanners and dye manufacturers. Prices are increasing and there is a steady demand. Department Bulletin 706, giving information on gathering, curing and sale of sumac, may be had for the asking by addressing Department of Agriculture, Washington, D. C. Certain sections of Pennsylvania, Maryland and West Virginia yield considerable quantities of the plant.

The more properly and regularly all refuse of the household is harmlessly disposed of the better for the healthfulness and comfort of the home.

No matter how small the flock the droppings should be carefully saved, stored, and either used as fertilizer for plants or disposed of to persons who can so use them to increase the fertility of the soil.

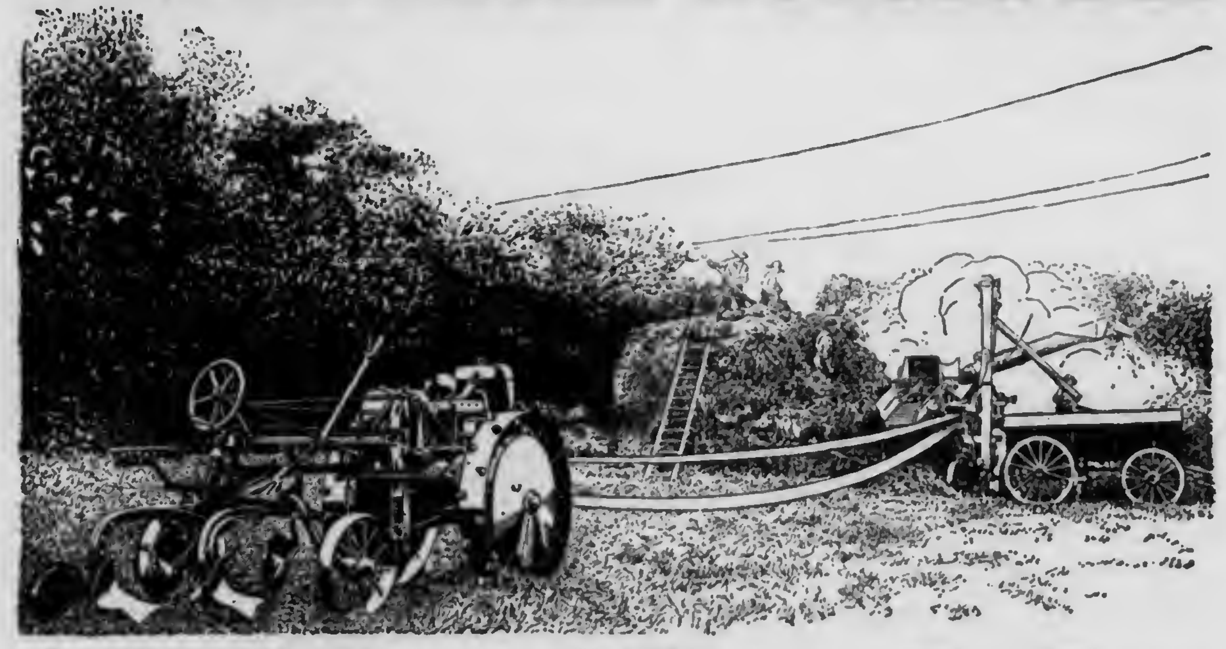
Good food habits are an important part of personal hygiene and thrift. Children get such habits by having suitable amounts of suitable foods served them and then being expected to eat what is set before them.

It is not necessary to build expensive poultry houses, but they should be serviceable, fairly roomy, well lighted, and well ventilated without drafts.

Grading potatoes for market increases the possibilities for sales and raises the price received. Keep the culls on the farm and save the cost of hauling.

Time was when we called it the house-fly; now we realize that typhoid-fly is a truer name.

MOLINE UNIVERSAL TRACTOR



Saves 1⅓ Men and 5 Horses Per Farm

Through the most comprehensive tractor survey yet attempted, we have found by figures from Moline-Universal Tractor owners—not by guess work—that the Moline-Universal actually saves an average of one and one-third men and five horses per farm.

Over 200 farmers in 37 states from Main to California and North Dakota to Texas were closely questioned, and their farms ranged in size from 40 to 800 acres. Every one of the Moline-Universal owners whose data forms a basis for these conclusions was selected at random from our list of owners, so that these results are average—not exceptional.

That the Moline is really a Universal Tractor and fits any size farm is proven by the fact that the farms reporting ranged in size as follows: 8%, 100 acres and under; 37%, 100 acres to 200 acres; 21%, from 200 to 300 acres; 13%, from 300 to 400 acres, and 19% above 400 acres. In their report 76% agreed that they could use the Moline-Universal wherever they used horses, and 83% said they could do better work—and thereby make more money.

Owners are positive in their statement that the Moline-Universal is a good investment, and 73% of the Moline owners state that they wouldn't farm again without the Moline-Universal Tractor, while the rest say that they would dislike to go back to horses.

In reply to the question, "Can you operate and maintain the Moline-Universal Tractor for what it would cost you to keep three or four horses?" Ninety-two per cent replied "yes." Many reported they could do so for less.

Space does not permit a complete report, but surely these figures must convince farmers and business men who believe in facts instead of theory that the Moline System of Power Farming is the most economical and efficient, and this is the reason why thousands of Moline Power Farmers are making more money with less hard work. Complete report of this tractor investigation will be gladly furnished on request.

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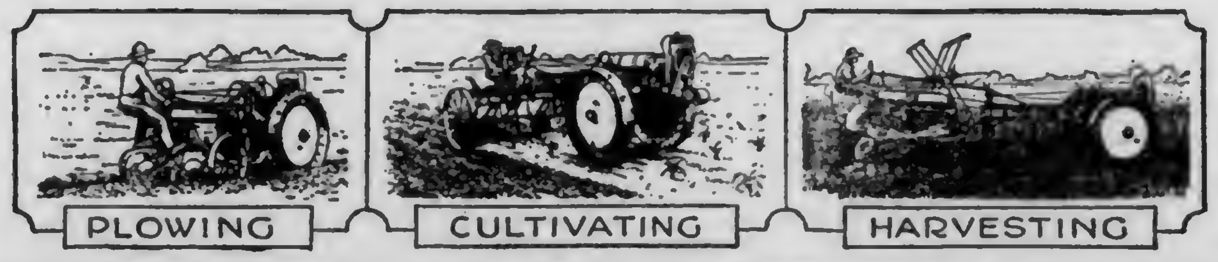

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F. A. HARRISON, 200 N. 2d St., Harrisburg, Pa.
Canadian Government Agent.

NUMBER 37

By A. F. CALDWELL

"Remember that Mary Matheson has got home; don't forget to invite her," cautioned Mrs. Elliott, as she stood in the hall, drawing on a pair of dark gloves. "I remember, one evening at the club, she had an excellent paper on 'Music in Shakespeare.' Be sure not to leave her off the list."

"I haven't, Mother. See?" and Mildred Elliott held up for inspection a delicately tinted envelope. "I have all the formal invitations written. Etta Marston and Joyce Witham, and a few of Phil's friends and I am going to call up by phone—Harold Coleman, Lloyd Wheeler, and one or two others."

"How about Robert Holman; have you invited him?" asked Mrs. Elliott, curiously.

"No; he's not in our set, Mother. Then again, he's almost a perfect stranger in Bradford—there is no reason why he should be invited!"

"But his mother would greatly appreciate it. I met her, you know, at the 'Good Samaritan Circle;' and I afterwards called on her. I'm sure you'd like her if you were only acquainted. And Robert—I've rarely met a more gentlemanly fellow. I think we ought to show him some attention; I should want some shown to Phil if he were in a new place."

"But," and Mildred's brow contracted just the faintest "impatient pucker," "you know he—he is only a day laborer; not like Phil and Lloyd Wheeler, for they are employed, one in a bank, and the other in a large insurance office. He—Robert Holman—werks with a railroad construction gang.

"We saw him—Agnes Hackett and I—Wednesday, when we drove down by the new concrete bridge. He was there by the roadside—and he had on the muddiest overalls and boots; they were a sight!"

"Still—clothes don't make—"

"No," interrupted Mildred, in the midst of her mother's argument, "they—don't. And yet we wouldn't want muddy overalls in our parlors, Saturday night. What do you suppose the McMorrisons would say! You know Eugene and Mabel are going to be here with the Holbrooks."

"Well, you must do as you think best; its your entertainment," replied Mrs. Elliott, and she opened the door to the street and went out.

"I don't see why Mother thinks I ought to invite him," thought Mildred. "I am under no obligations to them just because Mrs. Holman belongs to the 'Good Samaritan Circle,' and has returned Mother's call. Phil has met Robert Holman only once or twice, and he can't get back from his trip to Paxton in time to introduce him—and without Phil's being here it would be, to say the least, embarrassing.

"Besides, a fellow in his position wouldn't care to be present at a Shakespearian reading. I doubt if he ever even heard of the man, much less is able to appreciate him. I imagine he would be bored in hearing Professor Miller give Hamlet's soliloquies, and the casket scene from 'The Merchant of Venice.'"

Mildred quickly gathered up the envelopes containing her invitations, and placed them on the stand in the hall, where Tom could get them to mail, on his return from school.

"This evening I'll call up the girls and Phil's friends," and Mildred ran lightly up the broad carpeted stairs to her room.

Robert Holman had been in Bradford but a few weeks, and during that time had received but little attention from the young people of the town. He had been invited out but once to spend an evening, and that time by a neighbor who lived just across the street.

"I'm getting so I don't mind it," said Robert, on his mother's remarking, one morning, that she was sorry that he didn't have more association with the young people. "It did seem rather odd at first—after what we'd been accustomed to; but now I don't care. It gives me more time to devote to my study and work."

"Still, one needs companionship and a change from close application all the time," replied Mrs. Holman, wisely Then, too, our family was not brought up to a hermit life."

"But if folks don't care to cultivate our acquaintance at present," laughed Robert, good-humoredly, "we can't get far from the desert border land," and he went over to his desk, and was soon deeply absorbed with his drawing instruments and complicated mathematical calculations.

After dinner, the evening Mildred's younger brother Tom took her invitations to the post office to mail, she went to the phone and informally invited for the Saturday evening entertainment her most intimate girl friends, and then called up those of Phil.

"Will I? I consider it a great privilege to be invited," answered Lloyd Wheeler, on receiving Mildred's invitation.

"I was going to a political mass meeting," said Dick Randall, over the phone, "but I'll change my date. Nothing like an Elliott entertainment—as I know, from experience! Yes; I'll be there—and early, too!"

Next Mildred rang up 73.

"What? Please repeat!' demanded Central "Something is the matter with the line; I can hardly hear!"

"Seventy-three!" again called Mildred.

"Hello!"

"Hello!"

"Is this Mr. Coleman—talking?"

"Yes!" faintly, it was impossible to distinguish the voice.

"This is Mildred—Mildred Elliott. Can you come over Saturday evening, for a little Shakespeare reading? Professor Miller is to be here, and they say he's fine— those who have heard him. He was recommended to me by Dr. Lewis."

"Thank you! I'll be glad to be there. What num—"

"As tho you don't know where we live!" laughed Mildred, interrupting. "Well, that you needn't lose your way and go to the wrong place—its 224 North Winter Street."

"Thank you—I'll find it."

"I imagine Harold thinks that a huge joke," said Mildred, as she hung up the receiver. "Anyway, I'm glad he can come—he's lots of fun."

"Got an invitation to Mildred Elliott's?" asked Lloyd Wheeler, the next afternoon, as he met Harold Coleman, in the car, going home from the office.

"No."

"You haven't!"

"Didn't know there was anything doing," replied Harold. "What's up?"

"You're fooling me!"

"No; I'm not—honestly! What is it?"

"An entertainment Mildred's giving," explained Lloyd. "Some kind of a Shakespeare stunt. But I don't see how you happened to lose out!"

"As to that, I can't enlighten you," and Harold moving over slightly to give a gentleman who had just sat down more room. "But I couldn't go, anyhow; got to be out of town on business. Still, I would like to have had an invitation. A fellow doesn't appreciate being 'cut' by his friends—like that."

The rest of the way home, after Lloyd left the car, Harold spent speculating why he had been slighted—as he put it—by those he regarded as among his most intimate friends.

"There must be some mistake," he finally concluded. "I wouldn't have been left out purposely; it isn't like either Phil or Mildred. It will be explained all right; I'll trust the Elliotts for that."

"I think I must have my dress suit pressed today, Mother," declared Robert Holman, early Friday morning, bringing it down stairs with him when he came to breakfast. "It has not been used since—not since I attended Professor Van Horn's reception. My—that seems ages ago! Do you suppose I've forgotten all my manners?" playfully. "I do hope I'll know how to act at the Elliott's!"

It was with eager anticipation that Robert Holman was looking forward to Saturday evening. However, much he had endeavored to convince himself that he had not missed the social life to which he was accustomed since coming to Bradford, there was, nevertheless, a lack that his nature consciously craved. This was made evident by the invitation that he had received from Mildred Elliott.

"If its a Shakespeare evening, I guess I'd better brush up on the subject somewhat," he thought. "There was a time before I left college that I could repeat—well, I wouldn't want to say how many complete scenes from Shakespeare's works; but a good many. 'The Merchant of Venice' and 'Hamlet' I knew almost by heart.

"If Father hadn't been a professor of English literature, and insisted on my committing so much—a stated number of lines each day—I doubt if I ever would have taken the interest in poetry that I have. And it isn't bad to know—not for a civil engineer."

Robert Holman was one of the last of the guests to arrive, on Saturday evening He had been detained, owing to some differences among the men who were under him, and it was almost the hour set for the entertainment before he reached home.

"I don't like to be late the first time I'm really invited out," he thought, regretfully. "But I couldn't help it—it was no fault of mine."

He hurriedly dressed and, ordering a cab—he felt that the occasion justified for once the extra expense—he was driven hurriedly to 224 North Winter Street.

"I think he's coming!" Robert heard some one at the door declare, as he drove up to the curbing.

"I—I didn't imagine that I was of so much importance as that," he said to himself, a trifle nervously. "I thought I could just slide in practically unobserved, and occupy my little corner quite by myself—until I could get my bearings."

"I'm so glad you've come," announced Mildred Elliott, in an evident tone of relief, as Robert entered the hall. "We were almost afraid something might have happened; and it would have been such a disappointment."

Robert stammered something; he couldn't remember afterwards what, so surprised was he at the unexpected welcome he received.

On descending the stairs, after he had laid aside his coat and hat, he found Mildred waiting for him in the hall.

"Now for the introduction act!" thought Robert, adjusting a cuff that had slipped down. But here again he was surprised.

"I suppose you haven't any preference as to what you give first?" said Mildred, inquiringly. "People who have heard you greatly admire the second soliloquy scene from 'Hamlet,' so we must be sure of that. And then we want the shepherd scene from 'The Winter's Tale' and the casket scene from 'The Merchant of Venice.' Is that asking too much?',

"——I——"

Robert was completely bewildered! What did Mildred Elliott mean! That he—was expected—to entertain her guests? How—who had told her that he recited Shakespeare—when in college! But he hadn't attempted such a thing—not since he began his technical work.

"We are to have two musical numbers first," explained Mildred, supposing she had divined the cause of Professor's Miller's hesitation. "That will give you time to collect yourself—if you need any," smiling.

"I've been in more than one tight place—but this is the worst," thought Robert. Already the first musical number was half thru. "But I—I guess I can do it, tho. Its fortunate that I know those scenes, or did—once!"

He hurriedly went a over a few lines in his mind. Then abruptly, "Queer they should have done this without giving me notice; it isn't our way of doing things!"

As soon as the music ceased, Mildred came forward to introduce the evening's entertainer.

"With the permission of Miss Elliott," turning to Mildred, "I will recite a short scene from 'A Midsummer Night's Dream' before attempting the heavier selections," announced Robert.

Then, one after another, with enthusiastic applause from the appreciative audience, Robert Holman—whom no one in the company recognized in evening dress—gave readings from "Hamlet," "The Merchant of Venice," "The Winter's Tale," ending with the love scene from "The Taming of the Shrew"—the Latin lesson of Bianca.

While the latter selection was being given, a telegram was brought to Mildred Elliott. It read: "My train

has been delayed by accident at Colfax. Shall be unable to be with you. W. H. Miller."

"What has happened! What mistake had been made! Who is he—the man just finishing the Shakespeare part of the program?" Such thoughts in quick succession passed thru Mildred's mind.

True she had never met Professor Miller, so she had not been able to tell that it was not he who had been entertaining them. But who had come—who had taken his place!

"To whom are we indebted for the pleasure we have received from your reading"—Mildred hesitated, blushing in painful confusion. She had waited till the company had offered their congratulations before asking her question.

"Robert—Robert Holman," was the quick reply, and his manner was so gracious that Mildred rapidly regained her composure.

And then came explanations. The telephone central had given Mildred 37—the Holman number—instead of 73 which she had called for, the evening she invited her own and Philip's more intimate friends. And the buzzing of the wire prevented Robert from distinguishing the name of Coleman, when he was asked if that were he.

"I thought you were work—"

"So I am; working as a railroad grader," interrupted Robert, roguishly, as Mildred, greatly puzzled, looked at him critically in his evening suit. "I am the boss of the gang now, having finished my technical course."

"Didn't I tell you!' remarked Mrs. Elliott, with a slight tone of triumph in her voice, after the guests had gone.

"Yes; he's splendid!" replied Mildred. "But whoever would have dreamed him to be the same man we saw in the muddy overalls!"

TRAVELS OF THE LITTLE TIN SOLDIER

He was the largest and the best dressed and the bravest looking of all the toy soldiers in the toy shop. Some of the toy soldiers were made of paper and these tore easily if they even tried to drill. Some of the toy soldiers were made of tin and these bent if they had an encounter. But this toy soldier, who stood head and shoulders above the others was made of wood. He had once been part of a great pine tree that stood in the forest, and his heart was as brave and true as the heart of the tree.

His trousers were painted green with yellow stripes and his jacket was painted red with gold buttons. He wore a painted blue cap upon the side of his head with a band that went under his chin, and he carried a wooden gun in one arm. He could stand alone, for his wooden legs were glued to a block of wood, and his eyes were black and shining and his mouth was painted in a smile.

When the Toy Soldier went from the top shop to live in Gregory's house the little boy thought that he had never seen such a fine soldier in his life. He made him captain of all the soldier ninepins and guard of the toy train, and he took him to bed with him at night. Then, one day, James, who lived next door and was Gregory's neighbor, came over to play with Gregory.

"What a nice Toy Soldier!" James said.

"Yes, he's mine," Gregory said.

"May I play with him?" James asked.

"No, I said he was my Toy Soldier," Gregory answered.

"Then I'll take him," James said.

"I won't let you," Gregory said.

Then the two little boys began pulling the Toy Soldier to see which could get him away from the other, and the Toy Soldier did not like it at all. He was fond of a good battle, but not of a quarrel. He decided that he would not stay in a house where there was a quarrelsome boy and so he tumbled out of a window that was close by and fell, down, down to the street below.

The Toy Soldier had not lain long on the sidewalk when Harold passed by and picked him up.

"I wanted a Toy Soldier and here is the finest one I ever saw," Harold said, and he slipped the soldier inside his coat and started on, for he was going to school. The Toy Soldier lay close to Harold's watch that was tick, tick, ticking the time away, but Harold loitered and at last he stopped to play a game of marbles with another little boy whom he met.

"I don't care if I am late for school," he said.

"Oho!" thought the Toy Soldier, and as the two little boys played he dropped out from under Harold's coat and into the gutter. When Harold reached school, late, the Toy Soldier was gone.

Joe found the Toy Soldier in the gutter and ran home with him to his mother.

"I have a Toy Soldier!" he said.

"How brave he looks," said Joe's mother.

All the rest of the day the Toy Soldier went about with Joe and listened to what he said and watched what he did.

"I can't go to the grocer's; I'm afraid of his dog."

"I can't put in that nail. I am afraid that the hammer will slip and hit my finger." This was what the Toy Soldier heard. Then it was Joe's bedtime and the Toy Soldier went upstairs with him to bed, but Joe cried all the way.

"I'm afraid of the dark!" he said.

When Joe was asleep the Toy Soldier slipped out of his hand and fell into a scrap basket. He knew very well that he couldn't stay with a child who was a coward.

No one saw the Toy Soldier when the basket was emptied in the morning. He went with the scraps into a huge bag and then into a wagon, and then into a factory where men sorted the cloth to make it into paper. One of these men found the Toy Soldier and took him home to his little boy, who was lame and had to stay alone all day.

"Has it been a good day, John?" his father asked.

"Oh, yes!" laughed John as he hugged the Toy Soldier.

"You have my supper ready just in time," his father said, watching the soup bubbling in a shining pot on the stove.

"And I cleaned a little and set the table," John said.

"Has your back hurt you very much today?" asked his father.

"A little, but I don't mind that," John said. "See how fine the Toy Soldier looks standing on the table!"

"Oho!" thought the Toy Soldier, "now I have found a place where I can stay. Here is another soldier, cheerful and willing to work and be brave!"—Carolyn Sherwin Bailey.

ADORATION

God hath His solitudes unpeopled yet,
 Save by the peaceful life of bird and flower,
Where since the world's foundation He hath set
 The hiding of His power.

Year after year His rains make fresh and green
 Lone wastes of prairie, where as daylight goes
Legions of bright-hued blossoms all unseen
 Their carven petals close.

Year after year, unnumbered forest leaves
 Expand and darken into perfect prime;
Each smallest growth its destiny achieves
 In its appointed time.

Amid the strong recesses of the hills.
 Fixed by His word immutable and calm,
The murmuring river all the silence fills
 With its unheeded Psalm.

From deep to deep the floods lift up their voice,
 Because His hand hath measured them of old;
The far out-goings of the morn rejoice
 His wonders to unfold.

The smallest cloudlet wrecked in distant storms,
 That wanders homeless thru the summer skies,
Is reckoned in His purposes and forms
 One of His argosies.

Where the perpetual mountains patient wait,
 Girded with purity before His throne,
Keeping from age to age inviolate
 Their everlasting crown.

Where the long-gathered waves of ocean break
 With ceaseless music o'er untrodden strands,
From isles that day by day in silence wake,
 From earths remotest lands—

The anthem of His praise shall uttered be;
 All things created on His name shall call
And laud and bless His holy name, for He
 Hath pleasure in them all.

(Author Unknown.)

Whosoever the author may be, he has the soul of a true poet. This poem is taken from an old book and is a favorite of mine. I never tire of it. The more familiar it becomes the sweeter it seems to be.

Photograph taken in Northeastern Pennsylvania very appropriately illustrates the first, third and fourth stanzas.—C.

"All Thy Works Praise Thee, O Lord"

THE FRIENDLY HAND

When a man ain't got a cent,
 An' he's feelin' kind o' blue,
And the clouds hang dark and heavy,
 An' won't let the sunshine thru,
It's a great thing, O my brethren,
 For a feller just to lay
His hand upon your shoulder,
 In a friendly sort of way.

It makes a man feel curious;
 It makes the tear-drops start,
An' you sort o' feel a flutter
 In the region of your heart
You can't look up and meet his eyes;
 You don't know what to say
When his hand is on your shoulder
 In a friendly sort of way.

O, the world's a curious compound
 With its honey and its gall,
With its cares and bitter crosses,
 But a good world, after all.
An' a good God must have made it
 Leastwise, that is what I say
When a hand rests on my shoulder
 In a friendly sort of way.
 —James Whitcomb Riley.

Markets

PHILADELPHIA PRODUCE

Philadelphia, Pa., June 30, 1919.

Under supplies that are considerably lighter, prices on potatoes are fully 50 cents per barrel higher than were prevailing one week ago. The accumulations of last week have been cleaned up and today best Eastern Shore of Virginia potatoes were selling at $5.75@6 per barrel, with poorer grades ranging from $4.50@5.35 per barrel. Best Norfolks sold today at $4.75@5.25 per barrel as against $4.25@4.50 a week ago. Some very fine North Carolinas sold today at $5.50 per barrel, but the greater bulk of the North Carolina potatoes sold at $4.50@5 per barrel. No. 2 potatoes from all these sections sold from $2@3 per barrel, as to grading and size. The New Jersey crop of potatoes has started to make its appearance and there are now fairly liberal supplies coming. New Jersey potatoes sold today from 90c@$1.15 per basket for No. 1's with No. 2's at 60@65c per ⅝ basket. By next week New Jersey potatoes should be arriving very freely and stock from the south will not be meeting as active demand as at present.

Vegetables

Nearby New Jersey and Pennsylvania farmers are now supplying Philadelphia with practically all her fruits and vegetables. This week will probably see the close of the asparagus season as supplies are getting much lighter and quality generally poor. Fancy asparagus is selling as high as 30@35c per bunch, but most sales are within a range of 8@25c per bunch. The prices on both green and wax beans are much lower this week, green selling from 49@75c per ⅝ basket and wax from 35@50c per basket, with supplies quite liberal. New beets are possibly a little lower than last week, selling at 3@4½c per bunch, while beets in bushel hampers are drawing from $1@1.50 per hamper. Carrots have become quite plentiful and prices are therefore lower, ranging from 1½@3c per bunch with bushel hampers selling at $1@1.50 per hamper. New Jersey and Pennsylvania are supplying some very fine cabbage, the New Jersey stock selling at 50@65c per hamper, and the Pennsylvania at $2@2.50 per barrel.

The only corn on the market today was from North Carolina and this sold at $1.50@2.50 per crate, or $4@4.50 per barrel. Best cucumbers are coming from Maryland and Delaware and these are selling from $1.25@2 per bushel hamper. New Jersey lettuce is selling at practically the same prices as a week ago, viz: $1.25@2 per box and 75c@$1.25 per hamper. A car of New York state lettuce sold here this morning at $1.75@2 per box. With the crop of New Jersey onions arriving much more plentifully, prices on onions are much lower than they were a week ago. New Jersey yellows are selling at $1.25@1.65 per ⅝ basket, and the Eastern Shore yellows at $3@2.16 per bushel hamper. New Jersey white onions are bringing the fine price of $3.25@4 per bushel hamper, the higher price being paid for fancy white boiling onions. Parsley has suffered another set back. Supplies are plentiful and demand slow at 50c@$1 per hamper containing about 100 bunches. As we stated last week the New Jersey pea season is about over, and New York state is ready to supply the market. Three cars of New York state peas sold here this morning at $2@2.50 per bushel basket for good stock, while some which arrived in poor, heated condition only brought $1.50@1.75 per bushel. A few New Jersey peas are still arriving however, but they show a very wide range in quality and condition, best selling at $2@2.25 per basket, with poor as low as $1.

Radishes show practically no change from last week, selling from 1@2½c per bunch, as to quality. There was very little rhubarb on the market today but very little is now wanted and prices are only ranging from 2@5c per bunch. Romaine salad is showing quite some improvement as supplies are lighter and fancy romaine is now selling at $1@1.25 per box. Following our prediction of last week, squash has taken a big decline, and the same grade of squash that sold a week ago at $1.50@1.75 per ⅝ bushel basket sold this morning at $1@1.15 per basket, with some poorer grades as low as 75c, and the prospects are that even these prices will not be maintained and squash will be even cheaper before another week passes by. Hot house tomatoes are practically unchanged at 15@22c per pound. New Jersey is just starting forward her crop of tomatoes. Today they sold as high as $3@4 per ⅝ basket, but these high prices are only by reason of the fact that they are the first and only a few of them here. By next week New Jersey tomatoes should be here in fair quantity and more normal prices can be expected. Spinach is in very light supply and selling quickly when here at $1.50@2 per box. Watercress is in ample supply for the moderate demands at 2@3c per bunch.

Fresh Fruits

The new crop of apples has made its appearance from Maryland and Delaware points and the fine price of $2@3 per bushel hamper has been prevailing. The only strawberries now coming are from New York state and these are selling at 33@40c per quart. While a few blackberries are coming from Delaware and Maryland, New Jersey is supplying the greater bulk of them at 18@22c per quart, the market being much lower on account of the heavier supplies. New Jersey currants are drawing to a close, but New York state is supplying us with part of her crop which are bringing from 16@20c per quart. The only raspberries are coming from New Jersey and these are selling at 12@14c per pint. Gooseberries were in very active demand toward the latter part of last week and sold as high as 15@16c per quart, but demand is less active today and most sales are being made from 12@14c per quart.

Sour cherries sold today at 18@25c per quart and from 12@17c per pound, while sweet cherries from New York state sold at $1.25 per 6-lb. basket. Huckleberries are quite a little lower than a week ago as they are much more plentiful, but at the same time there is an active demand for them at 18@23c per quart. Cantaloupes were in very liberal supply here today, there being about 40 cars sold at prices ranging as follows: Standard crates, $2.50@3; pony crates, $2.25@2.75; flat crates, $1.15@1.25. There were also 21 cars of Georgia peaches here today which sold from $1.25@3 per crate depending on variety and condition. There were 10 cars of watermelons here which sold at $600 per car for the best large melons, while smaller ranged on down to $350 per car.

Poultry

There has been a change for the better in the market on live poultry, and the weak draggy market of last week is being followed by an active market at much higher prices. The same class of live fowls that sold a week ago at 33@34c per pound sold today at 37@38c per pound. Spring chickens are also firmer than last week, selling today at 45@55c per pound for fancy chickens, not Leghorns, while the Leghorn springers sold from 38@45c per pound, as to size and quality. Old roosters are ruling firm at 24@25c per pound.

Eggs

There has been a sharp advance of 3c per dozen in the price on strictly fine eggs which continue in very light supply and the market is ruling very firm at the advance. Many of the supplies, however, are showing more or less the defects incident to warm weather and this class of stock is dull and irregular in value, especially eggs that come from southerly points. Sales of eggs are being made at about the following basis: Pennsylvania and other nearby current receipts, 48c; firsts, 50c; seconds, 42½@44c; western extra firsts, 50c; western firsts, 47c; southern eggs, 41½@45c as to quality.

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LANCASTER PRODUCE MARKET

Lancaster, Pa., July 1, 1919.

Demand for high-quoted produce was slight. Potatoes were plentiful and declined to 40 cents per half peck, and cherries were offered at from 12 to 15 cents per quart. The canning season demand absorbed most of that supply. Many eggs were left unsold at the close of business and were carried back to the farms.

Butter and Eggs.—Creamery butter, 70c lb.; country butter, 55c lb.; fresh eggs, 46@48c dozen; duck eggs, 50c dozen; goose eggs, 10c each.

Poultry.—Dressed old chickens, $1.75@2 each; dressed young chickens, $1.75@2 each; old live chickens, 28c pound.

Vegetables and Fruits.—Asparagus, 8@10c bunch; parsnips, 5c bch; spinach, 30c ½ pk.; turnips, 15c per ½ pk.; potatoes, 35c ½ pk.; do., $2@2.25 bu.; new potatoes, 40c per ½ peck; cabbage, 6@15c head; cauliflower, 10@15c head; lima beans, 10@15c pint; tomatoes, 15c box; onions, 5c box; peas, 20c per ½ pk.; beets, 5c bunch; beans, 20c per ½ pk.; green corn, 60c dozen; lettuce, 15@25c head; oyster plant, 15c bunch; strawberries, 20c box; cherries, 12@15c box; raspberries, 15@25c box; watermelons, $1 each; cantaloupes, 15@25c each.

Grain Market.—Wheat, $2.20 bu.; rye, $1.50 bu.; ear corn, $1.75 bu.; oats, 60c bu.; timothy hay, $37 ton; mixed hay, $35 ton; wheat straw, $15 ton.

BALTIMORE PRODUCE

Baltimore, Md., June 30, 1919.

Produce.—Potatoes, new, No. 1, $4@4.25 bbl.; do., No. 2, $2@2.50 bbl. Cabbage, new, $2.25@2.75 crate; do., $3@7 per hundred. Lettuce, 50c@$1.50 basket. Onions, nearby, $2@2.25 basket. Spring onions, $1.25@1.50 per 100 bunches. Radishes, 2@3c bunch. Asparagus, $1.50@2.75 dozen. Rhubarb, 3@4c bunch. Cucumbers, $1@2.25 basket. Spinach, 30@45c basket. Carrots, 3@4½c bunch. Green beans, 75c@$1 hamper, do., wax, 75@90c hamper. Beets, 2½@4c bunch. Peas, $1.75@2 bushel. Green corn, $1.25@2.25 crate.

Fruits.—Apples, early June, $3@5 bbl.; $1@2 basket. Red Cherries, 15@20c; do., sour, 15@25c. Gooseberries, 8@12c lb. Blackberries, 15@20c quart. Red raspberries, 16@18c quart; do., black, 22@27c. Currants, 15@20c quart. Huckleberries, 16@22c quart.

Butter.—Creamery, western fancy, 53@54c; choice, 51@52c; pound prints, 54@56c. Nearby rolls, 45@46c. Dairy prints, 45@46c.

Eggs.—State, Pennsylvania and nearby, 44@45c; Eastern Shore and Virginia, 44@45c. Southern, 42@43c.

Live Poultry.—Springers, 48@55c lb.; old roosters, 21@22c; old hens, 34@36c lb.; ducks, 24@27c; do., spring, 35@40c; pigeons, 35@40c pair; guinea fowls, 50@70c each.

Grains.—Wheat, new, bag lots, $2.15@2.26 bu., as to quality. Corn, bag lots, No. 3, $1.92 bu. Oats, standard white, 77½c; No. 3 white, 77c. Rye, nearby, $1.50@1.53.

Hay.—No. 1 timothy, $38@39 ton; do., standard, $37@38 ton. Light clover, mixed, $35@37.50 ton. Clover, mixed, $30@35.50. Clover, clear, $27@29 ton. Tangled rye straw, $11.50@13.50. Wheat straw, $7.50@8.50 ton. Oat straw, $11@12 ton.

Mill Feeds.—Winter wheat bran, $53 ton; brown middlings, $54 ton; white middlings, $63 ton.

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NEW YORK PRODUCE

New York City, June 30, 1919.

Butter.—Steady; receipts, 9,227. Creamery, higher than extras, 51¾@52½c; creamery, extras (92 score), 51¼@51½c. firsts, 49½@51c; packing stock, current make, No. 2, 45@45½c.

Eggs.—Irregular; receipts, 11,543. Fresh-gathered extras, 51@52c; firsts, 45@47c; storage packed, extra firsts, 49@49½c; do., firsts, 47½@48½c; State, Pennsylvania and nearby western hennery whites, fine to fancy, 58@62c; State, Pennsylvania and nearby hennery white, ordinary to prime, 45@47c; State, Pennsylvania and nearby hennery browns, 53@55c; do., gathered browns and mixed colors, 50@52c.

Cheese.—Firm; receipts, 2,564. State, whole milk, flats, current make, specials, 32@32½c; do., average run, 31@31¾c; state, whole milk, twins, current make, specials, 31¾@32½c; do., average run, 30¾@31½c.

Live Poultry.—Steady; broilers, 40@55c; fowls, 34c; old roosters, 24c; turkeys not quoted. Dressed steady; broilers, 38@55c; chickens, 40@43c; fowls, 27@35c; old roosters, 19@22c; turkeys, 46@49c.

Vegetables.—Potatoes, old per cwt., $1@1.25; do., new; No. 1, $4.50@7 bbl; No. 2, $2.50@4 bbl. Asparagus, green, $1.75@4.50 doz. bunches; do., white, $1.50@3.50 doz. bunches. Beets new, $2@5 per 100 bchs. Carrots, new, $2@5 per 100 bchs. Rhubarb, $2.50@3 per 100. Scullions, $1@2. Cabbage, $1.50@3.25 crate. Lettuce, $1@1.25 basket.

Fruit. — Strawberries, 20@30c quart; raspberries, 10@17c pint; peaches, $1@2.50 crate. Cherries, red sweet, 8-lb. bas., $1@1.25 red sour, do., 75@90c. Gooseberries, 8@20c quart.

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PHILADELPHIA LIVE STOCK

Philadelphia, Pa., June 30, 1919.

Receipts of live stock for three days ending June 28 were as follows:

	Beef Cattle	Sheep and Lambs	Hogs
Total for Week ...	2,232	6,330	5,328
Previous Week ...	1,664	4,554	3,981

Calves.—Receipts of calves last week were 1,881 head against 1,328 head week previous.

Beef Cattle.—The market ruled firm, demand, and prices of calves were held under moderate offering and a more active demand.

Steers, fair to good, $14@15; common to fair, $12.50@14; bulls, good to choice, $11@12; fair to good, $9@11; common to fair, $7.50@9; cows, fat, per lb., good to choice, corn fed, 10@11c; do., fair to good, 8@10c; do., common to fair, 6½@8c; bolognas cattle, per lb., good, fleshy, 5½@6½c; common to good, 4@5½c; calves, extra choice, $20.50@21; fair to good, $19@20; common, $15@18; heavy, $8@11; Tennessee, choice, $16@18.50; other southern, $10@14.

Sheep and Lambs.—There was a better feeling in the market for lambs and values ruled firm, with prices of the top grade held slightly higher. Sheep ruled steady, with supply and demand fair. Quotations:

Sheep, sheared, wethers, extra, $10@10.25; good to choice, $8.75@9.50; medium, $7@8; common, $3.50@5; ewes, fat, heavy, $8@9; spring lambs, choice, $18@18.50; do., medium, $14.50@16; do., culls and commons, $11@13.

Hogs.—There was a fair demand and values were steadily maintained under moderate supplies. Quotations for best westerns, $23.

City Dressed Stock.—There was a fair inquiry for most descriptions and values were steadily maintained. Quotations:

Steers, 18@23c; heifers, 17@21c; cows, 13@17c; calves, city dressed, choice, 27@30c; country dressed, 23@25c; sheep, 16@22c; lambs, spring, 30@34c; hogs, 29c.

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LIVE STOCK MARKETS

Pittsburgh, Pa., June 30.—Cattle higher, supply 65 loads; prime, $15@15.50.

Sheep.—Active; supply 10 double decks; prime wethers, $9.50@10.25; culls and common, $3@5; lambs, $13@17.50; veal calves, $18.50@19.

Hogs.—Higher; supply 30 double decks; prime heavies, mediums and heavy yorkers, $22.50@22.65; light yorkers and pigs, $21@21.25; roughs, $20.25@20.60.

New York City, June 30.—Cattle.—Receipts, 3,740; easier; good to fairly prime steers, $13.25@15; stags, $12.90; common to fair bulls, $7@9.25; cows, $3.50@12.

Calves.—Receipts, 7,090; steady; common to prime veals, $17@21; culls, $12@16; skim-milk calves, $13; grassers, $10.

Sheep and Lambs.—Receipts, 7,250; firm; sheep, $7@10; wethers, $10.25; culls, $5.50@6; common to prime lambs, $16@18.75; culls, $14@15.

Hogs.—Receipts, 3,600; steady; light to fairly heavy hogs, $21.50@21.75; roughs, $18.75.

Lancaster, Pa., June 30.—Cattle.—Receipts, 1,495 head, against 937 head last Monday; market slow; prices steady. Beef steers, medium and heavy weight, good, $13@14.50; medium, $11.25@13; common, $10@11.75; light weight, medium and good, $10@13.25; common, $8.75@10.20; butcher cattle, heifers, $5@11.25; cows, $5.40@10.50; bulls, $5.50@12.40; canners and cutters, $4@4.75; canner steers, $6.20@8.60; veal calves, light and handy weights, $10@19; heavy weight, common, $10@18; feeder steers, heavy weight, $9.50@12.40; medium weight, $8.25@12.65; light weight, $7.10@11.25; stocker steers, $6@12.15; stocker bulls, $9@11.40.

Hogs.—Receipts, 185 head; market sluggish; prices steady; best grades, $21@21.50; light weights, $19.50@20; roughs, $17@19.50.

East Buffalo, N. Y., June 30.—Cattle.—Receipts, 5,100; active and 25@35c lower; prime steers, $14.75@15; shipping steers, $14@14.50; butchers, $9.50@14.50; yearlings, $10.50@15; heifers, $8.50@13; cows, $4.50@11; bulls, $8@11; stockers and feeders, $8.50@11.50; fresh cows and springers, slow, $5 per head lower at $50@160.

Calves.—Receipts, 2,300; active and 50c lower at $6@19.50.

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PHILADELPHIA HAY AND GRAIN

Philadelphia, Pa., June 30, 1919.

Baled Hay and Straw.—Receipts, 96 tons hay; dull and irregular. Timothy No. 1, $40@41; exceptional lots higher; No. 2, $38@39; No. 3, $35@36; clover-mixed hay, light and mixed, $38@39; No. 1 do., $35.50@36; No. 2 do., $33@35; No. 1 straight rye, $13@13.50; No. 2 do., $12@12.50; No. 1 tangled rye, $12.50@13; No. 2 do., $11.50@12; No. 1 wheat straw, $12@12.50; No. 2, $1b@11.50; No. 1 oat straw, $12@12.50; No. 2 do., $11@11.50.

Bran.—Steady. Car lots, including sacks, soft winter bran, in 100-lb. sacks per ton, $42@43; spring bran, in 100-lb. sacks, per ton, $41@42.

Wheat.—No. 1 Red Winter, $2.39; No. 2, $2.36.

Corn.—Yellow, as to grade, $1.88@1.90.

Oats.—No. 2, white, 79½@80c; standard 78½@79c.

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NEW YORK HAY AND GRAIN

New York City, June 30, 1919.

Feed.—There was a very quiet trade in the market for mill feed and the falling off in demand gave the market an easier tone. Offers of feed in transit were somewhat more liberal, but for one reason or another buyers had withdrawn and it was more difficult to do business.

Quotations: City feed, bran, $40; middlings, $48, in 100-pound sacks; red dog, $62, in 100 pound sacks; Western spring bran, $41@41.50; standard middlings, $49@49.50; flour middlings, $56; red dog, $63, all in 100-pound sacks, 30-day shipment. Oat feed, $32.50; rye middlings, $43; white hominy feed, $67, all in 100-pound sacks. Cottonseed oil meal, nominal; linseed oil meal, nominal, in 100-pound sacks.

Hay and Straw.—Offerings, especially of low grdae hay, continue excessive at all harbor points, trade very slow and prices on some grades are still lower today. The situation on the low grades is almost demoralized and the few sales reported are at very irregular prices, quotations being very largely nominal. Rye straw about steady. Oat straw dull.

Hay.—No. 1 large bales, $44@45 ton; No. 2, $43 ton; No. 3, $38@40; Shipping, $33@34 ton. Fancy light clover mixed, $42@43 ton. Clover, No. 1, mixed, $38@40.

Straw.—Per ton, No. 2 rye, $13@14.

Wheat.—No. 2 red, $2.37½. No. 2 hard winter, $2.37½.

Corn.—No. 2 yellow, $1.94½. No. 3, yellow, $1.93½.

Oats.—Standard, 79@79½c.

Rye.—Export, $1.52½.

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PHILADELPHIA DAIRY MARKET

Philadelphia, Pa., June 30, 1919.

Butter.—Receipts, 2,264 tubs. Demand was light and the market declined 1 cent under lower outside advices. Quotations:

Fresh, solid-packed creamery, extra, 52c; higher scoring goods, 53@55c; the latter for jobbing sales; extra firsts, 51c; firsts, 49@50c; seconds, 47@48c; thirds, 44@46c; sweet creamery, choice and fancy, 54@56c; do., fair to good, 49@53c; ladle packed, as to quality, 47@49c; packing stock, 43@45c; special fancy brands of nearby prints jobbing at 60@62c; good to choice, 55@59c; fair, 50@53c.

Cheese.—Was quiet but firm. New York and Wisconsin flats, current make, choice, 32¼@32½c; specials higher; fair to good, 31¼@31¾c; jobbing sales of fancy goods, 33½@34c.

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NEW YORK MILK MARKET

New York City, June 30, 1919.

Altho business was not so brisk last week as might be expected at this time of year, trade increased a trifle and the surplus was not quite so heavy. The July rate for 3 percent milk in 200 mile zone is $3.01 per 100 lb.; the 3.06 percent milk is $3.25 and the 4 percent $3.41.

Receipts of milk and cream in 40-quart cans for the week ending June 28, 1919, were as follows:—

Railroads	Milk	Cream
Erie	39,104	4,816
Susquehanna	8,572	142
West Shore	15,642	2,360
Lackawanna	64,520	3,316
N. Y. Central (long haul)	144,205	6,968
Ontario	48,160	1,922
Lehigh Valley	57,280	2,488
New Haven	6,940	72
Pennsylvania	12,440	465
Other sources	6,450	180
Totals	403,213	19,729
Same week last year	392,049	20,459

WOOL MARKETS

The Boston Commercial Bulletin of June 28 says:

There has been a steady demand for wool in the market during the week, especially for wools grading three-eighths and finer, for which prices are firm and tending higher. There is a steady movement of wool in the West also on a strengthening market.

The foreign markets are all strong, except perhaps for inferior wool and the manufacturers in England, like those in this country, are sold ahead for several months. Mohair is in moderate demand at unchanged prices.

Ohio and Pennsylvania fleeces: Delaine washed, 85 to 88c; delaine unwashed, 80 to 82c; fine unwashed, 61 to 62c; half-blood combing, 73 to 75c; three-eighths blood combing, 65 to 68c.

Michigan and New York fleeces: Fine unwashed, 59 to 60c; delaine unwashed, 75 to 78c; half-blood unwashed, 70 to 73c. three-eighths unwashed, 65 to 67c.

Wisconsin, Missouri and average New England: One-half blood, 67 to 68c, three-eighths blood, 62 to 63c; one-fourth blood, 60 to 61c.

Virginia, Kentucky and similar: One-half blood unwashed, 75 to 77c; three-eighths blood unwashed, 68 to 70c.

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TOBACCO MARKET

Now that the middle of the year brings the close of the transplanting season it may be said that the conditions have been generally favorable and practically the full intended acreage is now in the field and getting away into the growing season in good condition. Some of the earlier plantings have already made considerable growth and now comes the more or less intensive cultivation incident to the crops. The acreage has been decreased in all cigar leaf sections owing to somewhat unsatisfactory prices and slow market conditions, which have accompanied the 1918 product. Such decreases range as high as 50 percent in some localities but the average is much less. The attention incident to transplanting has detracted somewhat from the interest in market matters but it is known that values were further improved. Incidents are reported in which individuals sold their product at a full 100 percent advance as compared with previous low offers. It is said that at the present rate practically the whole of the crop outside of that which has been pooled will be absorbed, which of course is favorable to organization. Advances seem imminent from now on, which tendency will be abundantly supported by the reduced acreage of the present year. In Ohio the organized growers have some 3,500 cases and the acreage has been greatly reduced. Faith in the concerted movement here is practically unlimited and the profitable outcome cannot be doubted. Sales here by unorganized growers were at $12 to 15 per cwt., which is a considerable advance as compared with recent months of delay and draggy values. The growing crop here looks well and insects have caused less trouble than usual.

SUMMER HORTICULTURAL TRIP JULY 9—12.

The State Horticultural Association of Pennsylvania will join the New Jersey Association in the annual automobile tour July 9-12. The trip will start from Philadelphia at noon, July 9th, from Hotel Windsor as headquarters. Leave Hotel Windsor for the Bustleton section outside of Philadelphia. This is a vegetable growing section entirely. Arrangements in charge of Herbert S. Starkey. Supper will be served by the Bustleton Association. Wednesday night will be spent in Philadelphia.

Mr. Starkey will pilot any who wish to take in the early Dock Street markets on Thursday morning. Leave Hotel Windsor at 5 A. M. At 8.30 meet in Camden for the trip thru part of New Jersey, piloted by the New Jersey members. This trip takes in some of the largest and best known orchards and market gardens, viz the Glassboro-Grenlock-Haddonfield - Riverton - Burlington sections and ending at Trenton for the night.

Friday morning, July 11, leave Trenton at 9 A. M. for Freehold, N. J., to join the New Jersey Association in their meetings and run thru Monmouth County, which is one of the richest agricultural counties in the country. The trip will include visits to successful orchards and market gardens. Friday night will be spent at Asbury Park and the auto excursion on Saturday morning will follow the coast line over the Atlantic Highlands to the fruit and vegetable sections of Middleton.

Take your automobile certificate or drivers' license with you. It may save you an unpleasant experience. All who expect to make the trip should notify the secretary at once so that hotel arrangements can be made. For complete itinery and full details address H. F. Hershey, Secretary, Gettysburg, Pa.

COUNTY NOTES

York Co., Pa., (SE) June 25.—Farmers are well on with their work considering the wet weather. A large amount of fine hay has been put up. Wheat is ripening fast. Oats are looking well. Corn is growing nicely on high ground. Potatoes are doing well. Wheat, $2.15; rye, $1.75; shelled corn, $1.72; oats, 80 cents; milk, $2.70 for 4 percent milk; butter, 42 cents; eggs, 38 cents; country hams, 34 cents.—B. K. Shelly.

Montgomery Co., Pa., (SE) June 25.— The farmers are busy making hay, and report bumper crops of timothy and clover. Rye, wheat and oats all promise to yield well. At the grange meeting in Farmers' Hall, Worcester, the following subjects were discussed: Secretary Lane's Reclamation Plan; Daylight Saving Law; Farming—What For? and The Budget. Potato bugs are causing a lot of trouble this year. New potatoes are selling for 50 cents a half peck; wheat, $2.24 to $2.39; oats, 79 to 81c; corn, $1.87; bran, $41 ton; baled hay, $38 to $45; fat cows, $10 to $12; steers $13 to $16; butter 62c; eggs 53c. The Pen-American Air Craft Company, of Canada, has rented 2 acres of E. W. Anders' farm, near Fairview Village, for an aviation field. The State Highway Department has finished repairing the road from Ironbridge to Skippack, using oil and crushed stones. The long iron bridge across the Perkiomen Creek at Rahns is shaky, and the Road Commissioners have forbidden heavy traffic to cross.—H. M. E.

HOLSTEIN BREEDERS ORGANIZE

Montgomery County, Maryland, breeders of Holsteins met June 14th, at the home of C. V. Eldridge and organized a Holstein Breeders' Association which has the dual purpose of promoting the dairy industry and improving the dairy herds in the county. These are men of broad vision and they earnestly expressed themselves as desirous of seeing the improvement of all dairy herds and not only that of "black and white." It is very probable that a sale of Holsteins will be held at Hagerstown about fair time.—Marylander.

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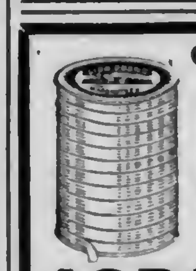

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LIVE STOCK

Claims Under State Dog Law

I have read with interest the editorial in last week's issue on the dog law. Yes it works. But we doubt if one percent of the city or country dog owners really know the state dog law. If they did the report would be different. Many dog owners think because they pay a license fee that their dogs are free to go any place and run the country to suit themselves. If they knew the law as it stands they would be more careful to know the whereabouts of their dog. On the other hand, if we all knew the law the claims paid would make a different story. Let me cite a personal experience.

On the night of June 3, this year, 52 of my half grown chickens, valued at $150 or more, were killed. We later found 19 of them buried in an adjoining lot of about five acres. Some were torn to pieces. Three dogs were found the next morning running from one coop to another, evidently looking for more chickens. One of the dogs was killed; the other two escaped and were chained at their homes. On presenting a claim for damages to our county commissioners I was turned down for the reason that I did not actually see the dogs kill the chickens. Even tho I had made affidavit to the effect, section 25 of the dog law would have barred me from having my claim paid. Hence for all concerned, the dog law, or especially sections 25, 26, 27, 28 and 29, should be published. Even our Justice declared that this part of the law was new to him. Will Pennsylvania Farmer publish these sections?

In my case I shall be obliged to quit the poultry business or run the chances of having the same stunt pulled off again. I cannot afford to have a watchman guard my place. The dog owners refuse to stand good for any part of the damage, and my loss is too great to have repeated.—R. A. Knisely, York Co., Pa.

Making Claims

As requested in the above and for the benefit of other readers we publish below the sections of the dog law referred to:

Section 25.—Whenever any person sustains any loss or damage to any live stock or poultry by dogs, or any livestock of any person is necessarily destroyed because of having been bitten by a dog, such person, or his agent or attorney, may complain to any township auditor, or to any justice of the peace, magistrate or alderman of the township, town, borough or city. Such complaint shall be in writing, shall be signed by the person making such complaint, and shall state when, where and how such damage was done, and by whose dog or dogs, if known. Such township auditor, justice of the peace, magistrate or alderman shall at once examine the place where the alleged loss or damage was sustained and the live stock or poultry injured or killed, if practicable. He shall also examine, under oath of affirmation, any witness called before him. After making diligent inquiry in relation to such claim, such township auditor, justice, magistrate or alderman shall determine whether any damage has been sustained and the amount thereof, and, if possible, who was the owner of the dog or dogs by which such damage was done.

Any owner or keeper of such dog or dogs shall be liable to the owner of such live stock or poultry in a civil action for all damages and costs, or to the county to the extent of the amount of damages paid by such county as hereinafter provided.

Section 26.—Upon making the examination required in Section 25, the township auditor, justice, magistrate or alderman shall immediately make a certificate thereto, signed and sealed by him, that such appraisment was regularly and duly made. If, by such examination, it appears that any damage has been sustained by the complainant, the township auditor, justice, magistrate or alderman shall deliver the report of such examination, and all papers relating to the case, to the claimant, or his agent or attorney, upon payment of the costs up to that time. Such report shall be delivered to the county commissioners to be filed in their office.

A Promising Crop

Section 27.—Township auditors, justices of the peace, magistrates and aldermen, for the special service required under Sections 25 and 26, shall receive $2 for each case, and five cents per mile traveled, to be paid by the claimant in each case. In all cases where damages are awarded, the fees paid by claimant shall be included in the amount of such damages.

Section 28.—Upon the Commissioners of the county receiving such report, if it appears thereby that a certain amount of damage has been sustained by the claimant, they shall immediately draw their order on the treasurer of the county in favor of the claimant for the amount of loss or damage such claimant has sustained according to such report, together with necessary and proper costs incurred. Such amount shall be paid by the proper county. No person shall receive any order for any claim until the township auditor, justice of the peace, magistrate or alderman before whom the claim was made has certified that due diligence was made to ascertain whose dog or dogs did the damage, and that the carcasses of the live stock or poultry killed, and for which damages have been assessed, were buried within 24 hours after the assessment of damages. The owners of any live stock or poultry killed by dogs, or live stock necessarily destroyed because of having been bitten by a dog, shall be paid 50 cents each for burial of such live stock or poultry killed, to be paid as other damages under this section. Upon payment by the county of damages to live stock or poultry by dogs, the rights of the owner of such live stock or poultry against the owner of the dog, to the extent of the amount of damages so paid by such county, shall enure to the benefit of the county.

Section 29.—No payment shall be made for any item which has already been paid by the owner of the dog or dogs doing the injury. The fact that no such payment has been made shall be certified by the township auditor, justice of the peace, magistrate or alderman.

When any payment is made by the county for any live stock bitten by a dog, such payment shall not exceed $100 for each horse or mule, $40 for each head of cattle, or $6 for each head of swine.

GREEN FEEDS ESSENTIAL FOR HOGS

Green feeds and pasturage are essential in keeping hogs. Even farmers in the middle west learned long ago that they could not rely wholly upon corn, but must feed something else to balance the rations. They have found their breeding stock ruined by the excessive feeding of corn. This grain is the ideal hog feed when used in connection with more nitrogenous foods but it is altogether too carbonaceous for a steady diet. Corn is lacking in mineral matter, which is needed for developing bone and making a large strong framework for the hogs to build their flesh upon. Hog raisers and chicken raisers have much the same problems to meet, and the excessive use of corn for chickens was long ago found to be wholly detrimental.

There is no reason why hogs should not have an abundant pasturage of rape, clover and other green feeds in sections where land is relatively cheap. In addition, they should have meat meal or tankage, which contains a large amount of nitrogen. When garbage is being fed, less of these substances will be needed because garbage usually contains a considerable amount of meat and other concentrated foods.—E. I. Farrington.

LICE INCREASE COST OF MAKING PORK

Lice add a cent a pound to the cost of producing pork. This has been found in tests recently completed at the experiment farm of the U. S. Department of Agriculture at Beltsville, Md. Twenty-four lousy hogs were secured and divided into two lots as nearly equal as to quality of animals as possible. The two lots were managed and fed the same way with the exception that one lot was treated to prevent lice. The animals were weighed at regular intervals and at the end of the fattening period it was found that the hogs infested with lice cost a cent a pound more to fatten than those which were free of the troublesome pest.

It was some time before lousy hogs could be found for the trial. When they were purchased the owner learned why, and he immediately built a dipping vat and began to treat the animals to prevent lice

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Will reduce Inflamed, Strained, Swollen Tendons, Ligaments, or Muscles. Stops the lameness and pain from a Splint, Side Bone or Bone Spavin. No blister, no hair gone and horse can be used. $2.50 a bottle at druggists or delivered. Describe your case for special instructions and interesting horse Book 2 R Free. ABSORBINE, JR., the antiseptic liniment for mankind, reduces Strained, Torn Ligaments, Swollen Glands, Veins or Muscles; Heals Cuts, Sores, Ulcers. Allays pain. Price $1.25 a bottle at dealers or delivered. Book "Evidence" free. W. F. YOUNG, Inc., 154 Temple Street, Springfield, Mass.

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LEGHORN CHIX hatched during July and August make good layers, the heavy breeds profitable broilers and layers. July and August delivery of day-old chix, W. & Br. Leg. $12 per 100; R. I. Reds, Brd. and W. Rks. $13 per 100; Buff Rks. and Opr. $15 per 100, by Parcel Post. 2 wk.-old chix $35 per 100; 4 wk. $45 per 100. Airdale pups for sale. Sunnyside Poultry Farm and Hatchery, Blanchester, O.

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200,000 CHICKS for 1919—R. I. Reds, Barred Rocks, Leghorns, Broilers, etc., at very low prices. We guarantee safe delivery, pay transportation charges on chicks to your P. O. Remember Keystone Chicks are hatched right, and shipped right. We have had 10 years experience. Thousands of satisfied customers. Fine Cat. free. The Keystone Hatchery, Richfield, Pa.

BABY CHICKS

23 varieties. Send for price list. We buy and sell anything alive.
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Chicks Late hatched chicks a paying proposition. Order now for June and July delivery. Prices very reas. Parcel Post prepaid and safe delivery guaranteed. S. C. White and Brown Leghorns and Barred P. Rocks. Booklet free. THE CYCLONE HATCHERY, Millerstown, Pa.

Tiffany's Superior Chicks Silver Laced and White Wyandottes, Buff Barred and White Rocks, S. C. Reds, White Leghorns, Pekin and Indian Runner Ducklings. Aldham Poultry Farm, R 39, Phoenixville, Pa.

Selby Service Satisfies Ship us your produce, poultry and eggs. Penna. Potatoes a specialty. Returns day goods are sold. Ask for our market letter.
SELBY PRODUCE CO., PHILADELPHIA

CHICKS FOR SALE from 3 to 6 weeks old; Barred Rocks and mixed breeds at 3 weeks, 25c; 6 weeks, 50c. Satisfaction guaranteed. CRYSTAL SPRING STOCK FARM, Littlestown, Pa. M. E. Basehoar, Prop.

Bred to Lay S. C. WHITE LEGHORNS. Don't buy an egg or chick before you get our free catalog. SLATY RIDGE POULTRY FARM, Box 5, PALMYRA, PA.

S. C. White Leghorn BABY CHICKS. June and July delivery, $13 per 100. Tom Barron strain, the great layers.
C. P. SHIREY, STEWARTSTOWN, PA.

INDIAN RUNNER DUCK EGGS, 12 for $1.00. Breeders $1.50 each. Order from this ad.
H. E. DEITZ, MECHANICSBURG, Pa. R. 6

Baby Chicks For Sale July and August. Barred Rocks, R. I. Reds, & Leghorns. Buckeye Hatchery, Millerstown, Pa.

December 9, 1918.
You will please continue my ad in your paper. I would be doing an injustice to myself and to the Pennsylvania Farmer if I would not continue, unless I was not going to do any business.
J. ELMER LONG,
Slaty Ridge Farm,
Palmyra, Pa.

Veterinary

Conducted by W. C. Fair, V. S.

Advice thru this department is free to our subscribers. Each communication should state history and symptoms of the case in full; also the name and address of writer. Initials only will be published. We cannot make reply by mail. This is one of the most valuable columns of the paper and we invite readers to make use of it. Clippings from this column, when properly preserved and classified, make one of the most valuable medical symposiums a farmer-stockman can obtain.

Cow Ejects Food.—For the past 12 months one of my cows, while lying down and chewing her cud, drops fluid from mouth, enough sometimes to make small pool. This cow appears to be in good health and is giving large mess of milk. J. M. F., Orctanna, Pa.—I would suggest that you examine her teeth and inside of mouth. I hardly believe you will find much wrong. There must be either a mechanical trouble, or perhaps a change of feed might help correct the discharge of food from mouth. You need not worry about her as it is an ailment which usually rights itself.

Unhealthy Skin.—I have a calf whose skin is pretty much covered with a sort of dandruff and I am anxious to clean her up as she is good stock. I have been feeding a commercial calf meal and skim milk, three times a day. She has some skin blotches. A. R. G., Johnstown, N. Y.—Put ½ pint kerosene in two gallons of soap and water and wash calf daily. Groom the calf as you do a horse, once or twice a day. Give her one-half of a teaspoonful cooking soda in food at dose, twice a day.

Horse Fails to Perspire.—I have a team of heavy draft horses and one of them does not sweat when it is right warm, but he pumps hard enough to shake his whole body. Can I feed him anything that will make him perspire? Last summer during the very hot weather is when he first showed any of this panting. Now lately he is in same condition as he was last year. I. D. B., Mohrsville, Pa.—Give your horse 1½ ounces sweet spirits nitre in drinking water three times a day when he fails to perspire fairly free. Wash him with tepid water, two or three times a day. He is not in a fit condition to do heavy, hard exhausting work, and should be rested during very hot weather.

Sore Shoulders.—For the past two years one of our horses has been troubled with sore shoulders. I have tried more than half a dozen commercial remedies, none of which seem to fit the case. He has no bunches or hard spots, just raw angry looking sores. I have tried three different kind of collars, but when horse is worked, especially during hot weather, his shoulders become raw. W. H. G., Town Hall, Pa.—Apply peroxide hydrogen to raw parts, three times a day. Ten minutes later apply one part powdered alum, four parts oxide zinc, and five parts boric acid. Dust some of the powder on face of collar or sweat pad. Keeping the collar clean will help greatly in healing shoulder sore. Sore shoulders heal faster if the horse runs in pasture.

Splint Lameness. — We have a three-year-old colt that shows lameness in left fore leg when first taken out of stable. After I drive him 10 or 15 minutes I am unable to tell he is lame. Have examined him as well as I know how, had shoe off and examined foot, but found no tender spot. I thought he might have picked up a nail. A horse trader was at my place the other day and wanted to trade for him, but on account of this lameness he said he might always be a cripple. I asked him what caused his lameness and he called it splint lameness. Now if he has a splint can he be cured, or had I better take what I can get for him, which is one-third less than market value. A. C. H., Benton, Pa.—I am inclined to believe the trader located the lameness, for the reason that in splint lameness the horse usually walks sound, but trots lame; furthermore in most cases exercise seems to reduce the lameness and in mild cases they get entirely over it. Most cases are curable. Clip off hair, apply one part red iodide mercury and six parts lard, once a week. Do not sell your colt on account of splint for with treatment 19 cases out of 20 recover and stay cured.

400 Cortland County Cows For Sale 400

110 Fresh cows. Try a load of these if you want milk.
150 Cows due to calve this month and next. Good size and the best dairy type you ever saw.
70 Registered cows, fresh and due to calve soon.
10 Registered Bulls, with a lot of good breeding.
60 Heifers. They are extra high grades. Mostly due to calve this spring.

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The World's Grand Champion herd, winning twice as many first prizes at the National O. I. C. Show as all other breeders put together, Calloway Edd being the Grand Champion boar. Also our herd has been undefeated at all the big fairs for the past two years. Stock of all ages for sale. Get our catalog. Crandell's Prize Hogs, Cass City, Mich.

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Young Boar and Sow Pigs, open and bred Gilts and Service Boars. Write for valuable book on Hog Management, free.
ENFIELD FARMS, W. H. WHITNEY, Owner,
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Fashion Herd OF BIG TYPE POLAND CHINA young sows bred for Summer and Fall farrow to Giant Smooth Wonder and Ohio Kind 2nd. I am taking orders for Spring pigs out of my 700 and 800 lb. sows, to be delivered at weaning time. Folder and prices on application.
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The fast growing bacon breed. Stock any age for sale. Free circular. LOCUST LAWN FARM, Bird-in-Hand, Box 2, Lancaster County, Pa.

O. I. C. CHOICE APRIL PIGS, weigh 45 lbs. at two months. From big true-type stock. Good enough to ship anywhere C. O. D. Pedigrees. HOWARD FETTEROLF, MAINVILLE, PA.

10 Chester White Pigs, 8 weeks old, $9.00 each, with pedigree. Also grade pigs. Write your wants.
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REG. BERKSHIRE PIGS for sale. July, August and Sept. prices right. 4 gilts open; nice ones 100 to 140 pounds. W. J. McCONNELL, OXFORD, PA

Reg. O. I. C. and C. W. Pigs. Bred gilts and sows sold. Satisfaction and safe delivery guaranteed.
JOHN L. VAN HORN, TROY, PA.

Duroc Pigs $30 Per Pair. Pedigreed. No kin.
O. O. WEEKS, DeGRAFF, OHIO.

Big Type POLAND CHINA SOWS, farrow second litter July, 300 lbs. Price, $100, express paid. BELROSE FARMS, Richford, N. Y.

Duroc JERSEY SPRING PIGS and gilts, bred for July and Sept. farrow. Grand Champion blood lines. Geo. W. Crim, Uhrichsville, O.

O. I. C. Pigs 2 and 3 mo. old, heavy bone, short nose. Reg. free.
BRUBAKER BROS., Star R., Cocolamus, Pa.

BERKSHIRES by Lady Longfellow's Champion. 8 week pigs, $20.
G. D. BARNES, GROVE CITY PA.

Service Boars. Superior animals of the local home-use or local-market breed, the Cheshire. Ready now. Pigs also. Morningside Farm, Sylvania, Pa.

REG. O. I. C.'S all ages. Booking orders for June pigs; Gilts bred for August farrow. BLACK DIAMOND MINORCA FARM, Mt. Bethel, Pa.

Chester Whites Boar and Sow Pigs. Bred Sows. Collie dogs.
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REG. POLAND CHINAS. Fall Boars and gilts. February and March pigs. Prices reasonable. Satisfaction guaranteed. R. H. LYLE, Cadia, Ohio.

Chester Whites Choice Registered spring pigs, a few older. Write your wants.
J. A. BOAK, New Castle, Pa. R. F. D. 4.

Large Berkshire Swine Registered High Grade. Prices reasonable. Write
HOMB FARM, CENTER VALLEY, PA.

REGISTERED O. I. C. Herd Boar for sale, sure breeder. Also booking orders for Aug. and Sept. Pigs. BENJ. H. RUTLEDGE, Honesdale, Pa. R. 3.

CHESTER WHITES. Choice Reg. and young pigs from spring litters; large type and good quality. These pigs will please you. Philip Price, West Chester, Pa

Duroc Pigs The large type with quality. All ages. Prices reasonable.
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Durocs, all im. Yearling and Fall yearling boar and Fall boars. Fall gilts, bred for Aug., Sept. and Oct. Spring pigs, e. sex. I. D. Jackson, R. 10, V. Wert, O.

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"Both milk and fat are produced at lowest rate in general by the cows consuming the most food." This conclusion is reached by Prof. H. H. Wing, Professor of Dairy Husbandry at Cornell, after a year's observation of the University Experiment Station's herd.

Holsteins are large and healthy, capable of converting large quantities of coarse feed into the best of milk suitable for all purposes, but particularly in demand for infant feeding and for cheese making. If interested in

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Sons of Rag Apple Korndyke 20th

Beautiful bull calves from cows making 12,000 lbs. milk per year, by this wonderful son of the great Rag Apple Korndyke 8th, who is out of a 32.5 cow. Only $75.
SONDERN & HOUDEQUIN, AVONDALE, PA.

STEVENS' HOLSTEIN FARM OF CORTLAND, N. Y.

King Korndyke Sadie Vale Jr., No. 20391, two nearest dams averaging 36 pounds of butter in 7 days, heads my herd. Butter records from 17 pounds two-year-olds to 34 pounds at full age. Also high grade Holstein calves, either sex, $20.00 each. Write your wants. PAUL H. STEVENS, Prop.

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HIGH GRADE HOLSTEIN CALVES. Either sex. Shipped anywhere. Write for prices. Satisfaction and safe delivery guaranteed. FRANK GAMEL, PINE GROVE FARM, LOCKE, N. Y.

Registered Holstein and Guernsey bulls from calves to serviceable age. 250 animals in the herd. BONNYMEADS FARMS, R. D. 1, Harrisburg, Pa.

Polled Holsteins registered with the horned ones, only naturally hornless. Catalogue for stamp. GEORGE E. STEVENSON & SONS, Clarks Summit, Pa.

Holstein Bulls from A. R. O. dams. Write your wants; they are priced to sell. M. E. Basehoar, Crystal Spring Stock Farm, Littlestown, Pa.

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Ayrshire Bull Calves From high record A. R. Dams
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Sows and gilts bred for September farrow.
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Binder Twine Get our low 1919 prices. Farmer agents wanted. Sample free.
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Thoroughbred Belgian Hares for Sale. Write your wants. Satisfaction guaranteed. James R. Eckenrode, Newville, Pa., R. 1. Sunnyside Rabbitry.

Chester White Hogs, All Ages

Shorthorn Bulls. R. L. MUNCE, Canonsburg, Pa.

Pure Bred BROWN SWISS BULLS, also one pair young Jennetts. Come and see the goods. G. EUGENE ROWN, Forksville, Pa

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Daniel McCaffrey's Sons
623-625 Wabash Bldg., Pittsburgh, Pa.

Stop This Waste of Nature's Greatest Soil-Food
FEEDING THE FARM
The Value of Manure and how to Utilize it.
New Idea Spreader Co. Coldwater, O.

Government figures show the appalling waste of *seven hundred million dollars each year* through the failure of farmers to get the most from their stable manure.

These figures represent the cost of haphazard methods that borrow soil-fertility---and do not return it---of manure piles behind the barn with their nitrogen, potash, and phosphoric acid rapidly leaching away---of wagon-tail distribution where the pitch fork scatters manure in uneven lumps, to enrich some portions of the soil and starve others.

The New Idea Changes Loss to Profit

Thousands of farmers, however, have turned their share of this loss into gain. They are now getting three, five, ten---yes, even as high as fifteen bushels more to the acre. And they are doing this without extra labor or extra cost ---*with the manure spreader that pays for itself twice over in its first year's use.*

NEW IDEA TRADE MARK REG.
The Original Wide Spreading Spreader

THERE is a vital need on every farm for this better spreader. It's the spreader that everyone knows—that loads high, hauls easily, shreds manure fine and spreads it a full seven feet wide.

The NEW IDEA is built for long, hard service. It can't be compared with any other spreader on the market. Examine one carefully and you will see why. You will notice the heavy steel construction, the direct chain drive without gears or clutches, the big steel distributor paddles, the lever at seat regulating spread of 3, 6, 9, 12, or 15 loads to the acre, shredding cylinders, chain conveyors, etc.

If you want to get the most from your manure, regardless of conditions—start spreading regularly with the NEW IDEA. Cover every inch of your ground with well shredded manure that has come fresh from your stable, rich in liquid fertilizer, and you will get results that will prove more than anything we can say.

Right now you especially need the NEW IDEA for top dressing your crops. They will respond to the treatment—quickly and profitably. And there's no danger of burning or crushing as in hand spreading. The NEW IDEA shreads it so fine that it cannot possibly injure the tenderest of your growths.

See your NEW IDEA dealer without delay. Give him the opportunity to point out the many ways in which the NEW IDEA leads all other spreaders made.

IN THE WEST— this company's spreaders are marketed under the trade-name **"NISCO"**

New Idea Spreader Company,

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"Spreader Specialists"

A copy of the latest NEW IDEA catalog, together with "Feeding The Farm," the best handy booklet ever published on the subject of scientific fertilization—are yours for the asking. Write today.

PENNSYLVANIA FARMER
AGRICULTURE THE KEYSTONE OF NATIONAL PROSPERITY
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What Does it Cost to Produce Milk?

The Method by Which Pennsylvania Cow-Testing Associations Answer This Question

By PROF. A. A. BORLAND

PENNA. STATE COLLEGE

"What does it cost you farmers to produce a quart of milk?" This is the first question usually asked by investigating committees when a controversy arises between producer and distributor concerning the price of milk. The farmer has found that feed costs, labor charges, and general expenses have greatly increased during the last few years, and that the sanitary restrictions governing the production of milk have become more and more stringent. Dairymen have had a firm belief that the price they have received for milk has not been commensurate with the cost of producing it. They have been desirous that accurate cost of production records be kept, since such records establishing the cost of producing milk would justify them in asking a fair market price for it.

On the other hand, the consumer who has been paying a higher price for milk than formerly and who naturally desires a good article at as low a price as possible has raised the question as to whether the higher price of milk has been warranted by the increased cost. Both from the standpoint of the consumer who wants to know if the price of milk is too high, and from that of the farmer to whom it is essential that the price be high enough to enable him to make a living from his dairy herd, it has become increasingly important that accurate accounts be kept of the cost of producing milk.

Partial cost of production records have been kept by cow-testing associations for several years. These records took into account simply the feed cost of milk production. They furnished an abundance of accurate data on this phase of the subject and enabled dairymen to prove their point regarding increased feed costs. The testing associations, however, kept no data as to cost of labor, interest on the investment, repairs on buildings and equipment, insurance, taxes, depreciation on cows, buildings and equipment, veterinary service, breeding fees, tuberculin testing, ice, bottles, cans, crates, bedding, salt, gasoline, and other incidental expenses on every practical farm.

The need for accurate data on some of the foregoing items became so urgent in Pennsylvania in 1916, on account of the controversy over the milk question in the vicinity of Pittsburgh, that J. M. McKee, the Washington County Agricultural Agent, requested the men in charge of the cow-testing associations in that county to keep a record of the labor costs in addition to the feed records. These labor records proved valuable in giving additional evidence as to the exact cost of producing milk, and in securing a fair price for milk in the Pittsburgh district. A little later blanks were prepared by E. L. Moffitt, in charge of Farm Management Extension Work at the Pennsylvania State College, so as to include all the items entering into the cost of milk production. These blanks were placed in use in several of the cow-testing associations in the state.

The Owner of These Cows Knows Exactly What They Charge Him For Producing a Quart of Milk

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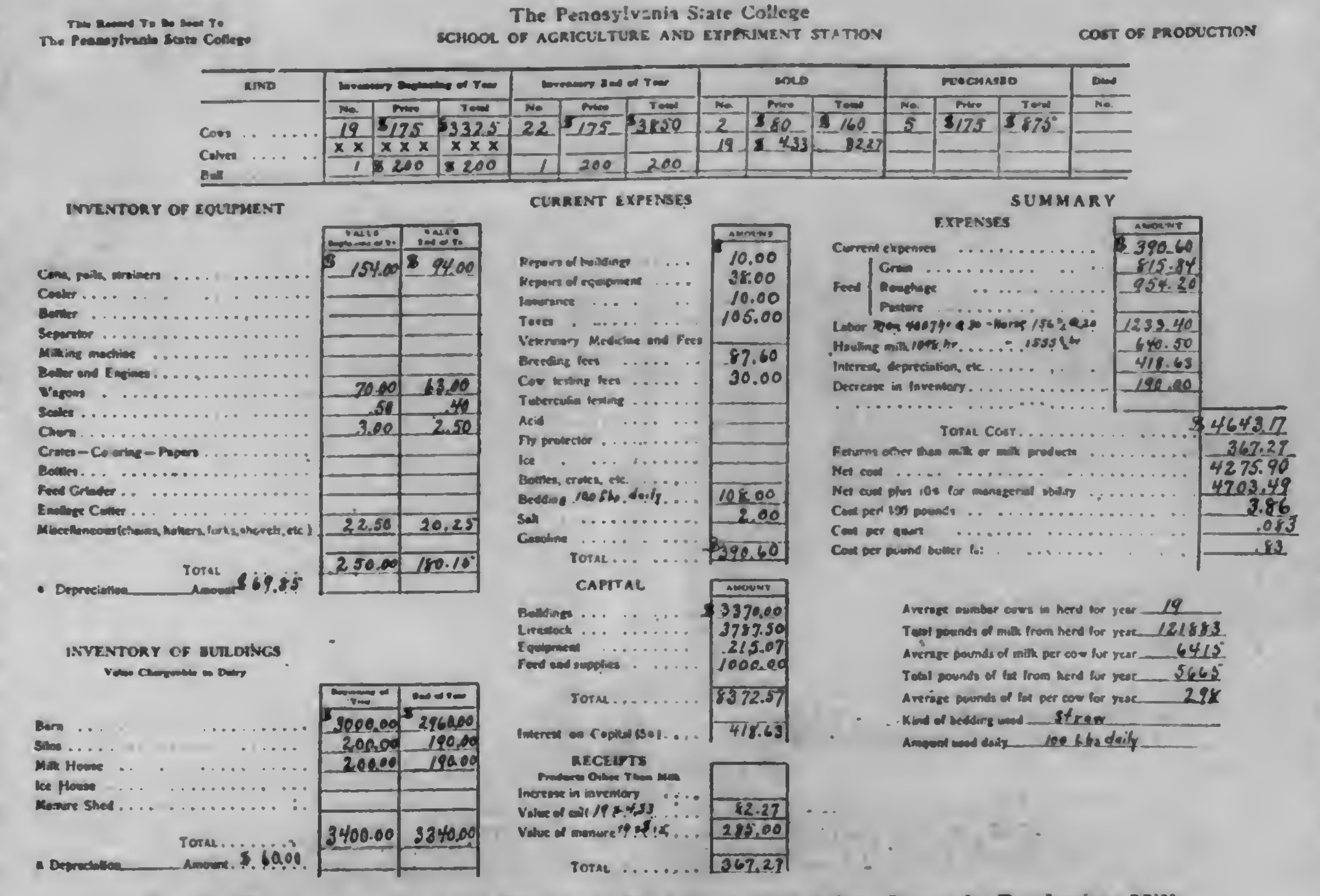

This Record To Be Sent To The Pennsylvania State College

The Pennsylvania State College
SCHOOL OF AGRICULTURE AND EXPERIMENT STATION

COST OF PRODUCTION

KIND	Inventory Beginning of Year			Inventory End of Year			SOLD			PURCHASED			Died
	No.	Price	Total	No.	Price	Total	No.	Price	Total	No.	Price	Total	No.
Cows	19	$175	$3325	22	$175	$3850	2	$80	$160	5	$175	$875	
Calves	X X	X X X	X X X				19	$4.33	8227				
Bull	1	$200	$200	1	200	200							

INVENTORY OF EQUIPMENT

	Value Beginning of Yr.	Value End of Yr.
Cans, pails, strainers	$154.00	$94.00
Cooler		
Bottler		
Separator		
Milking machine		
Boiler and Engines		
Wagons	70.00	63.00
Scales	.50	.40
Churn	3.00	2.50
Crates—Coloring—Papers		
Bottles		
Feed Grinder		
Ensilage Cutter		
Miscellaneous (chains, halters, forks, shovels, etc.)	22.50	20.25
TOTAL	250.00	180.15

Depreciation Amount $69.85

INVENTORY OF BUILDINGS
Value Chargeable to Dairy

	Beginning of Year	End of Year
Barn	$3000.00	$2960.00
Silos	200.00	190.00
Milk House	200.00	190.00
Ice House		
Manure Shed		
TOTAL	3400.00	3340.00

Depreciation Amount $60.00

CURRENT EXPENSES

	AMOUNT
Repairs of buildings	$10.00
Repairs of equipment	38.00
Insurance	10.00
Taxes	105.00
Veterinary Medicine and Fees	
Breeding fees	87.60
Cow testing fees	30.00
Tuberculin testing	
Acid	
Fly protector	
Ice	
Bottles, crates, etc.	
Bedding 100 lbs. daily	108.00
Salt	2.00
Gasoline	
TOTAL	$390.60

CAPITAL

	AMOUNT
Buildings	$3370.00
Livestock	3787.50
Equipment	215.07
Feed and supplies	1000.00
TOTAL	8372.57
Interest on Capital (5%)	418.63

RECEIPTS
Products Other Than Milk

Increase in inventory	
Value of calf 19 @ 4.33	82.27
Value of manure 19 @ 15	285.00
TOTAL	367.27

SUMMARY
EXPENSES

	AMOUNT
Current expenses	$390.60
Feed — Grain	815.84
Feed — Roughage	954.20
Feed — Pasture	
Labor [illegible]	1233.40
Hauling milk 10¢ hr. 1555½ hr	640.50
Interest, depreciation, etc.	418.63
Decrease in Inventory	190.00
TOTAL COST	$4643.17
Returns other than milk or milk products	367.27
Net cost	4275.90
Net cost plus 10% for managerial ability	4703.49
Cost per 100 pounds	3.86
Cost per quart	.083
Cost per pound butter fat	.83

Average number cows in herd for year 19
Total pounds of milk from herd for year 121883
Average pounds of milk per cow for year 6415
Total pounds of fat from herd for year 5665
Average pounds of fat per cow for year 298
Kind of bedding used Straw
Amount used daily 100 lbs daily

No. 2—Equipment, Current Expenses, Feed Costs and Other Items in Producing Milk

Stop This Waste of Nature's Greatest Soil-Food

Government figures show the appalling waste of *seven hundred million dollars each year* through the failure of farmers to get the most from their stable manure.

These figures represent the cost of haphazard methods that borrow soil-fertility---and do not return it---of manure piles behind the barn with their nitrogen, potash, and phosphoric acid rapidly leaching away---of wagon-tail distribution where the pitch fork scatters manure in uneven lumps, to enrich some portions of the soil and starve others.

The New Idea Changes Loss to Profit

Thousands of farmers, however, have turned their share of this loss into gain. They are now getting three, five, ten---yes, even as high as fifteen bushels more to the acre. And they are doing this without extra labor or extra cost ---*with the manure spreader that pays for itself twice over in its first year's use.*

NEW IDEA TRADE MARK REG.

The Original Wide Spreading Spreader

THERE is a vital need on every farm for this better spreader. It's the spreader that everyone knows—that loads high, hauls easily, shreds manure fine and spreads it a full seven feet wide.

The NEW IDEA is built for long, hard service. It can't be compared with any other spreader on the market. Examine one carefully and you will see why. You will notice the heavy steel construction, the direct chain drive without gears or clutches, the big steel distributor paddles, the lever at seat regulating spread of 3, 6, 9, 12, or 15 loads to the acre, shredding cylinders, chain conveyors, etc.

If you want to get the most from your manure, regardless of conditions—start spreading regularly with the NEW IDEA. Cover every inch of your ground with well shredded manure that has come fresh from your stable, rich in liquid fertilizer, and you will get results that will prove more than anything we can say.

Right now you especially need the NEW IDEA for top dressing your crops. They will respond to the treatment—quickly and profitably. And there's no danger of burning or crushing as in hand spreading. The NEW IDEA shreads it so fine that it cannot possibly injure the tenderest of your growths.

See your NEW IDEA dealer without delay. Give him the opportunity to point out the many ways in which the NEW IDEA leads all other spreaders made.

IN THE WEST-- this company's spreaders are marketed under the trade-name **"NISCO"**

New Idea Spreader Company,

COLDWATER, OHIO

"Spreader Specialists"

A copy of the latest NEW IDEA catalog, together with "Feeding The Farm," the best handy booklet ever published on the subject of scientific fertilization—are yours for the asking. Write today.

NEW IDEA SPREADER CO. COLDWATER, OHIO
THE NEW IDEA

PENNSYLVANIA FARMER

AGRICULTURE THE KEYSTONE OF NATIONAL PROSPERITY

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What Does it Cost to Produce Milk?

The Method by Which Pennsylvania Cow-Testing Associations Answer This Question

By PROF. A. A. BORLAND

PENNA. STATE COLLEGE

"What does it cost you farmers to produce a quart of milk?" This is the first question usually asked by investigating committees when a controversy arises between producer and distributor concerning the price of milk. The farmer has found that feed costs, labor charges, and general expenses have greatly increased during the last few years, and that the sanitary restrictions governing the production of milk have become more and more stringent. Dairymen have had a firm belief that the price they have received for milk has not been commensurate with the cost of producing it. They have been desirous that accurate cost of production records be kept, since such records establishing the cost of producing milk would justify them in asking a fair market price for it.

On the other hand, the consumer who has been paying a higher price for milk than formerly and who naturally desires a good article at as low a price as possible has raised the question as to whether the higher price of milk has been warranted by the increased cost. Both from the standpoint of the consumer who wants to know if the price of milk is too high, and from that of the farmer to whom it is essential that the price be high enough to enable him to make a living from his dairy herd, it has become increasingly important that accurate accounts be kept of the cost of producing milk.

The Owner of These Cows Knows Exactly What They Charge Him For Producing a Quart of Milk

Partial cost of production records have been kept by cow testing associations for several years. These records took into account simply the feed cost of milk production. They furnished an abundance of accurate data on this phase of the subject and enabled dairymen to prove their point regarding increased feed costs. The testing associations, however, kept no data as to cost of labor, interest on the investment, repairs on buildings and equipment, insurance, taxes, depreciation on cows, buildings and equipment, veterinary service, breeding fees, tuberculin testing, ice, bottles, cans, crates, bedding, salt, gasoline, and other incidental expenses on every practical farm.

The need for accurate data on some of the foregoing items became so urgent in Pennsylvania in 1916, on account of the controversy over the milk question in the vicinity of Pittsburgh, that J. M. McKee, the Washington County Agricultural Agent, requested the men in charge of the cow-testing associations in that county to keep a record of the labor costs in addition to the feed records. These labor records proved valuable in giving additional evidence as to the exact cost of producing milk, and in securing a fair price for milk in the Pittsburgh district. A little later blanks were prepared by E. L. Moffitt, in charge of Farm Management Extension Work at the Pennsylvania State College, so as to include all the items entering into the cost of milk production. These blanks were placed in use in several of the cow-testing associations in the state.

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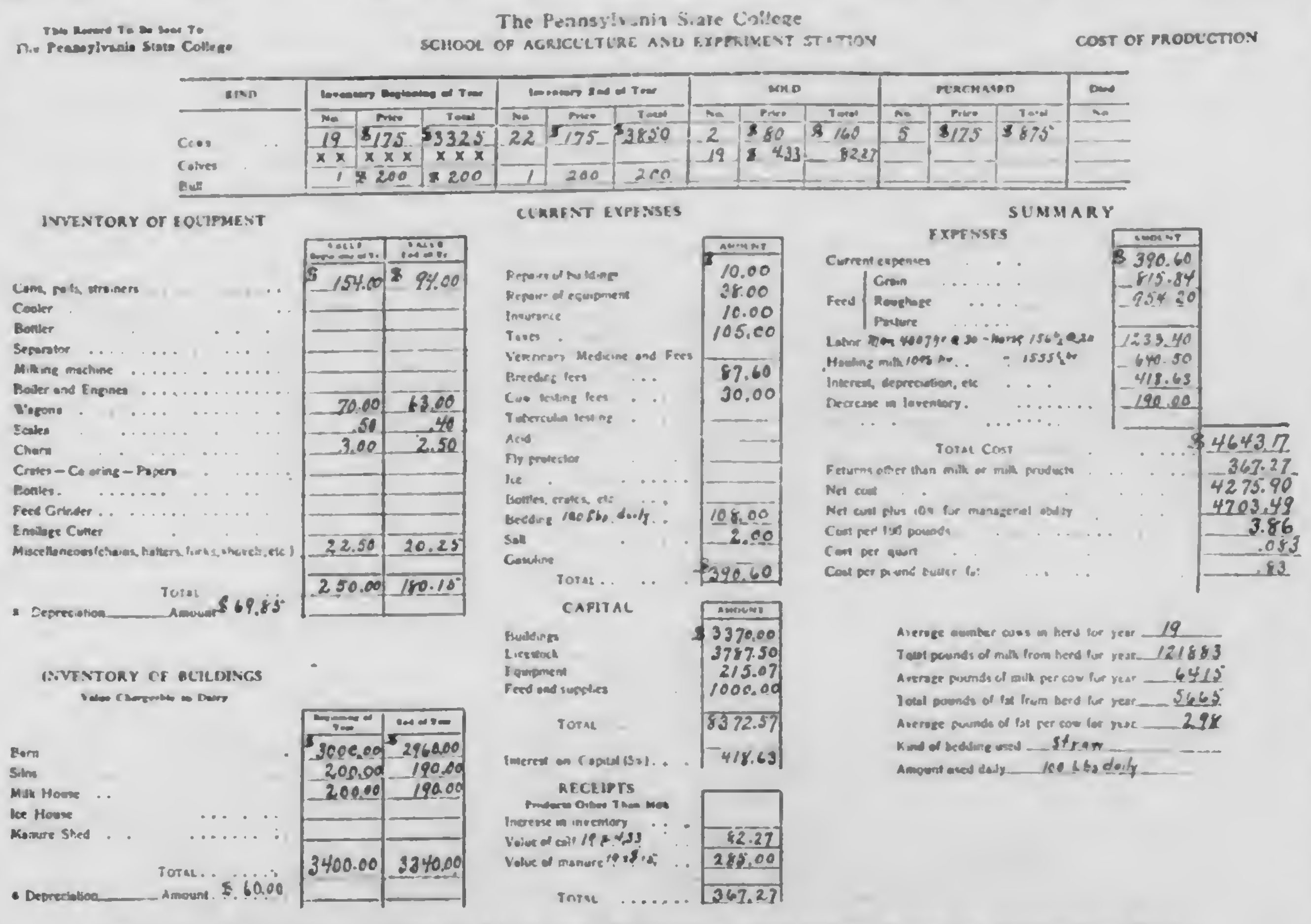

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	Roughage	954.20	
	Pasture		
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Hauling milk 10% hr. – 1555¾ hr.		640.50	
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(Con. on Page 6.)

INTENTIONAL SECOND EXPOSURE

Farmer Boys in Business Life

The Hill Farms Send Many Boys, But What of the Farms Themselves

Many a lawyer and many a business man, prominent in his city, owes his success to the early training that he got on the home farm some years ago, perhaps back on the hills or in some isolated locality. Those old farms, that for the time being offered an apparently hard life, made in those days and are making today the best citizenship in the land. One business man said to me: 'I was raised on an old Connecticut farm." Then he straightened himself and added, "But I didn't stay there." That is about what comes into the mind of the boy and youth and even the old farmer himself. To make a success seems to be "I didn't stay there."

On the surface and in the mind of the average townsman this is the test. If he didn't stay there he may have amounted to something. If he did, what then? One close observing lawyer said. "The broadest man in the country is the farmer so far as he is informed." Too often it happens that the hard working farmer hardly has time to inform himself as he would like, and for that reason he not always occupies the place of real leadership in the community that he should. Then the townsman usually gets the most money and that frequently places him ahead.

"I wish that young man who has recently opened a law office across the corridor from mine would get a little more snap in his heels. He seems to be a nice fellow. Guess he didn't grow up on one of our hill farms." Well, he didn't. There was a good bit of money in the family and he is the only heir to it. "Our boys who are to be our future citizens are the best and by far the most important crop of the farm." We know all these things, but what is there in the situation to encourage the young people to stay on the farms? In my opinion there is much, but I am not now going to discuss that point. It is difficult to handle it rightly. Just now I want to tell what the lawyer said to me today, at dinner. This man perhaps stands practically at the head of his profession in his city. He commenced by saying:

"Your county has a smaller population than in 1875, altho it now has a city and many villages that have grown to a much larger population than they had at that time." He mentioned many other similar counties, one of which has a decrease of 25 percent in population. Why is this, he asked, and why did I leave that farm on the hill and come to the city? Then he answered it by saying. "There is more money in the city and greater profit can be made there."

This is not good argument to put before the boy whom you are trying to interest in staying on the farm, I know. But we may as well face the fact if such it be. I am tempted to stop here and remark that only a small proportion of those who go to towns make the marked successes, and many do not even acquire a home. Practically none who really get to farming in dead earnest fail to secure a home and have it paid for unless prevented by ill health. It is true that it requires industry, economy and efficiency beyond that of the average townsman; but he is all the better man for that.

To come back, the lawyer observed that the old home farm still stays with the family. Within a few years the farm has been regenerated. Formally he said they went to market and asked the dealer what he would pay for the product, and then going into the store, asked what must be paid for some article there. "We have eliminated one of these," he said. "We set our price on what we sell." That is what our dairy farmers have been trying to do and the next few months may determine whether we are going to succeed. That is my view. "No business can succeed and let the other party set the price both ways."

Just so long as the city offers greater inducements in the way of acquiring property there will be a drift from the country to the city. It is not the bright lights and the movies that send the large proportion to towns. Personally I believe that the question is partly social, but it is largely economical. The social part will undoubtedly be figured out when the financial or economical is solved. Really I am not expecting farming to offer the very large financial rewards that are found in a few lines of business. I would not have it as profitable as that, but it should be more profitable than it is. It seems to me that it must be in time.

Grass Grows Again Where Lime Was Applied to Poor Soil

Then my lawyer friend went on to speak of the quality of the hill farms in southern New York. These have sometimes been shunned. His farm of something like five hundred acres is quite typical of the section. The hay crop is now three to three and a half tons to the acre, and occasionally even more. Lime and manure have made the difference under proper tillage, altho phosphate has been added to some extent. The soil of the hill lands is strong and readily productive but needs treatment of the sort to which it is adapted. It is a rugged country in some respects. It makes rugged citizens, the kind that hold the democracy intact, and it needs just the sort of cultivation and feeding that nature designed for it.

A Tractor Furnishes Steady, Ample Power For Hay Loading

Ruggedness is characteristic along all lines in this section. It is not to be despised. This land will respond to a liberal application of brains and muscle, with a good admixture of common sense and experience. A great agricultural section is this, and worthy of better appreciation from the country at large. Lands are so cheap as to be ridiculous in price.—H. H. Lyon, Chenango Co., N. Y.

Not All Barberries Spread Rust

Some persons have been at a loss to determine whether the barberry bushes on their premises are of the harmless Japanese variety, or the common variety, which has been tried and found guilty of spreading the much dread "wheat rust" so destructive to this important grain crop.

According to the plant disease workers of the New York State College of Agriculture it is not difficult to distinguish between the two varieties. They give the following descriptions which should enable anyone to determine whether the barberries on his premises should be rooted out, or may be safely kept.

The common barberry, which scientists call Berberis vulgaris, is the black sheep of the barberry family. It may be distinguished from its harmless Japanese brother in this way: It grows to a height of three to five feet, and has rather erect stems covered with grayish bark. The flowers are yellow, and are borne on a short axis one to two inches long. The berries are reddish in color, oblong, and also are clustered on an axis. The edges of the leaves are saw-toothed, and the slender spines are almost invariably three-forked—a most important thing to remember, inasmuch as the spines on the Japanese variety are almost never three-forked.

Japanese Variety Shorter

The harmless Japanese barberry, which scientists call Berberis thunbergi, is not as tall as the common variety. It grows only two or three feet high, and has slender, spreading twigs, and has brown bark instead of grayish. The flowers resemble those of the common barberry, but are borne singly on short slender stems, never in clusters. The berries, further, are elliptical in form instead of oblong, and in the fall and winter are deep red or scarlet. Like the flowers, the berries are borne singly. The leaves are green in summer and reddish in the fall. Their edges are never saw-tooth. As already mentioned, the spines are single, and never three-forked.

It is important that the harmful varieties should be rooted out, but it would also be a pity for anyone to destroy a beautiful hedge of the Japanese type because he did not understand the difference between the two kinds.

CUTTING CONTROLS ALFALFA YELLOWS

Alfalfa yellows, an ailment which if neglected results in permanent injury to alfalfa, can be controlled in only one way, says the United States Department of Agriculture—by cutting the crop as soon as the yellows appear. This disease is characterized by yellow discoloration of the leaves, which in some instances assume a copperlike hue. The growth of the plant is checked as soon as the yellowing attacks the majority of the leaves. The leaves fall off, the growth of the plants is stunted, and unless the disease is checked in time the alfalfa plants frequently are permanently injured.

Ordinarily the yellowing appears on the second or third crop of alfalfa, from June 1 to September 1. The cause has not been identified, and no effective treatment other than immediate cutting of the crop has been found. If the growth is adequate, the hay should be raked, cured, and stored as live stock roughage. If the growth is only enough to provide clippings, the best plan is to let them remain on the ground. In most instances the subsequent cuttings of alfalfa will show no evidences of yellowing where the crop which was diseased is handled in the outlined manner.

All the commercial varieties of alfalfa adapted to agriculture thruout the northern two-thirds of the United States are susceptible to yellows.

Building A Sewage Disposal System

Details in Construction and Operation of Disposal System For Farm Use

By F. W. KNIPE

PENNA. STATE COLLEGE

Mr. H. E. G., Montgomery Co., Pa., writes that he wants to install a sewage disposal system with septic tank and wants directions for laying out and installing such a system.

The problem of sewage disposal is a serious one, especially in Pennsylvania where so many limestone formations occur. It is an undisputable fact that a large percentage of our disease epidemics, especially typhoid fever, come from improper disposal of sewage, a great deal of which could be prevented if a little precaution were used.

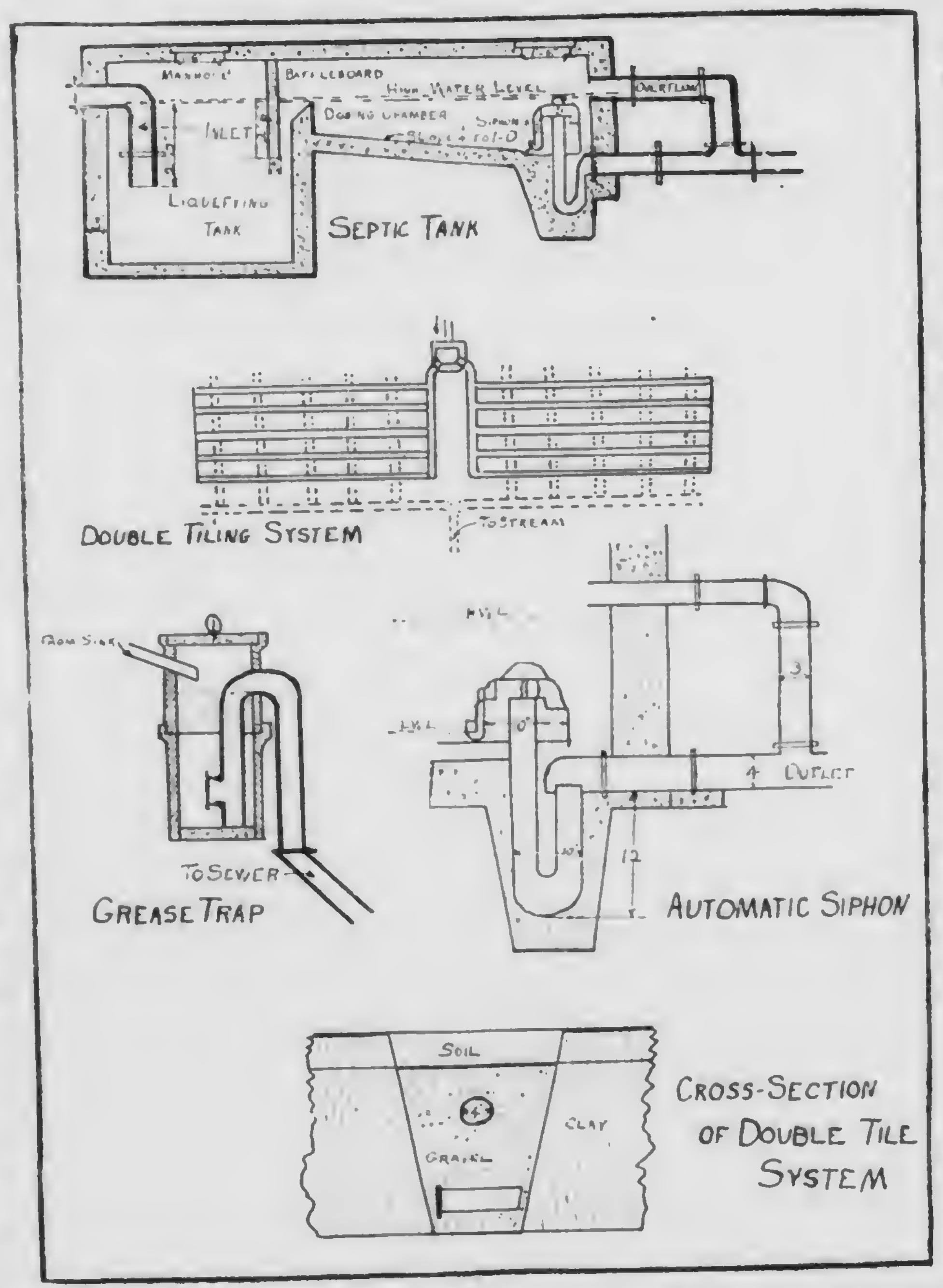
A septic tank, installed at comparatively small cost, is the best known method of disposing of this sewage in rural communities where community sewage disposal tanks are out of the question. These septic tanks have three great advantages. First, when properly installed they improve sanitary conditions to the point where disease epidemics from this source are practically unknown. Secondly, they lighten housework by reducing the number of steps necessary in disposing of waste water, such as kitchen refuse and washing water. Thirdly, they provide the cheapest way of disposing of sewage. The initial cost is the first, last and only cost of a properly installed system. Furthermore, the possibility of doctor and undertaker bills is greatly reduced.

Two storage chambers are necessary for a septic tank, and after the liquid leaves the second chamber an adequate tiling system must be installed to purify it. These three separate parts will be discussed individually. Both tanks must be water tight for the liquid contained in them is often poisonous, since no purification takes place until the tiling is reached. Let it be clearly understood here in the beginning that absolutely no chemicals are used for purification, this taking place by means of air and bacteria only, as will be explained further along.

First Storage Chamber

In the first chamber the sewage must be stored under anaerobic (without air) conditions sufficiently long for complete liquification to take place. This means that no air can be allowed to come in contact with the material undergoing liquification. This process is carried on by anaerobic bacteria and organic organisms which work only where no air is present and which will die in the presence of air. These organisms are always present in sewage, and will multiply rapidly under favorable conditions. It is not intended to imply that the top of this chamber must be air tight, for it need not be. In fact, a manhole should be installed in it. This airtight condition is brought about by the sewage itself. For some time after a new septic tank has been put into use considerable odor will be given off which will gradually lessen until it disappears. What takes place is just this: As the sewage is liquified and broken down it forms a thick scum over its top which in time becomes so thick that no odor or air can possibly get thru it. Upon this scum largely depends the success of the septic tank. Provision must be made in the first chamber for the safety of this scum, so that it is never disturbed. The inlet sewage pipe must have its discharge end below the scum, so that no rupture takes place from incoming refuse. And a baffle board must be placed near the outlet so that none of the outgoing liquids disturb it. Placing the inlet below the water line also makes it act as a trap, so that no odor may be carried back thru the pipe line into the house.

In figuring the capacity of a septic tank there is only one consideration to be borne in mind. After this is known all else follows according to a more or less set rule. The point to consider is the prospective average number in family. Allowing 30 gallons per person per day, the first chamber must hold a three days' flow. In other words, for one person allowing 30 gallons per day, the first chamber must hold 90 gallons and for a family of five persons, the first chamber must hold 450 gallons. About three days time is necessary for the anaerobic bacteria to break down the solid matter entering the first chamber. This solid matter will all liquify and must do so before it may safely pass into the second chamber, for if it enters the second chamber in a solid form it would probably stop up the automatic siphon which will be mentioned later. No paper heavier than tissue paper should be allowed to enter the first chamber, because other paper is usually made of rags and will not liquify.



Construction of the first chamber may vary somewhat, depending upon local conditions. It may be rectangular in form but its length should never be more than one half its depth. However, a much better and more economical construction is equal width and length, and twice the depth. For instance, for a family of five requiring a chamber of 450 gallons capacity, or a trifle over 60.15 cubic feet, the dimensions should be 3 feet long by 3 feet wide by 6 feet 9 inches deep, which gives 60.75 cubic feet, or a little more than is required. However, about one foot and three inches should be added to this depth, allowing a space between the water line and top of the tank and making a total depth of eight feet. Such shape has a tendency to prevent any undue disturbance from newly entering sewage.

The Grease Trap

Somewhere in the waste line leading up to the first chamber should be placed a grease trap. Probably the most convenient place for this trap is just before the point where a junction between kitchen sink waste pipe and sewer main can be conveniently made. Oils and greases decompose very slowly in the septic tank and their presence greatly retards the decomposition of other materials. The construction of such a trap is very simple and is illustrated in the drawing. It is constructed of two sewer pipes 24 inches in diameter, placed one above the other and the joint made tight with a rich mixture of cement. Two holes are cut in the top pipe to serve as an inlet and outlet to the trap. A concrete bottom is placed in the trap and the inlet and outlet pipes are cemented in place. Three-inch vitrified sewer tile and bends may be used for the outlet pipe. Grease must be drawn off by hand in some way every few days or it will get into the septic tank and cause trouble.

As has been stated, the discharge end of the inlet pipe to the tank should always remain below the water line for the two reasons mentioned. Running from end to end of the septic chamber and about six inches distant from the overflow, should be placed a baffle board. This board, constructed of reenforced concrete and about six inches in thickness, should extend from the roof of the chamber down about one foot below the water line. Its purpose, as before mentioned, is to aid in the preservation of this all-important scum which will form in chamber one. If the second chamber is placed directly next to the first one, an opening may be allowed between the chambers at the water line and from end to end of the chamber. Should the second tank be placed at a distance from the first, an overflow pipe connecting with the second chamber and of sufficient size to carry away all liquid should be placed just at the water line. In this case no baffle board is necessary, because this overflow pipe would be made to dip about a foot under the liquid in the first chamber, thus not disturbing the scum.

The Second Chamber

Chamber two is called the "dosing" chamber, altho as previously stated, no "dosing" takes place. Its purpose is merely to store up the liquified material coming from the first chamber until such time as it should be discharged. Figured at 30 gallons per day per person, this tank should hold one and one-half days' supply. In other words, for one person this tank should hold 45 gallons, and for a family of five it should hold 225 gallons. Later the contents of this chamber are discharged into the tiling system where it is purified, but in this second chamber it is still just as poisonous as it was in the first chamber.

No scum is formed in the second chamber because complete liquification has already taken place. Consequently the shape need not be so particular, neither is a baffle board necessary. However, in this chamber is constructed an automatic siphon for draining it, which siphon will be discussed later on. The bottom of this chamber should slope toward the automatic siphon, so that any sediment which collects may be carried off. It is not necessary to place the dosing chamber right by the septic chamber if inconvenient to do so. The dosing chamber may be located a considerable distance away provided the overflow pipe from the septic chamber is perfectly tight thruout its length and provided there is sufficient slope between the two.

In construction the second chamber should be built shallow enough to allow the tiling system to be laid near the surface of the ground, and when built on sloping ground it should be built cubical in form. If sufficient slope may be obtained, there is no reason why the second tank should not be as deep as the first.

The automatic siphon consists of a bell- [illegible]

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ESTABLISHED 1880 PUBLISHED WEEKLY

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PHILADELPHIA, PA., JULY 12, 1919.
VOLUME 46 NUMBER 2

Our job is to serve our readers. Whenever and wherever we can help you, write us.—The Editors.

Cover Crops

IT IS none too early to prepare for cover crops to be seeded in last cultivation of corn, tomatoes and other "hoed" crops, for turning down next spring. A wide range of experimentation shows that cover crops are among the cheapest and surest means of building up and maintaining soil fertility. They cost but little for seed and labor. They provide the vegetable matter that goes to build up soil humus. Crops selected for the community will make large growth and provide large amounts of green manure for spring turning. Do not delay the seeding until too late, and do not neglect the crop because it is cheap.

City Market Study

THE city of Philadelphia will undertake an interesting experiment of submitting its marketing facilities and machinery to a scientific commission study. A commission has been appointed by authority of city councils to study marketing operations in the city and report a plan for improvement of equipment to facilitate transportation, distribution and general handling of food products within the city for the benefit of all classes. The Commission includes representatives of producers, commission dealers, labor unions, large employers of labor, transportation companies, consumers' leagues and civic bodies. It also numbers among its membership several trained investigators. It is impossible to predict what the commission may do, but it has the possibilities of one of the most complete and most helpful studies.

Wool Purchase Report

CLAIMS of serious irregularities in the wool purchase board, in operation during the war, were recently made. According to a statement widely published, both wool producers and the government were made victims by the basic plan upon which wool was purchased. It was claimed that the government price to farmers was based on the grease wool unit, and that the dealers were permitted to turn the wool over to the government on the scoured wool basis at a price that permitted a wide margin of profit. The statement made no effort to analyze shrinkage in scouring or to point definite amounts of money lost or gained by the plan in use. If true, the operations of the board should be fully investigated. If the claims are unfounded, they should be withdrawn by the organizations putting them out. The accusation as published is too general to be satisfactory. It should be substantiated by further proof, or withdrawn. There is too much at stake for farmers' organizations to jeopardize their standing thru careless or premature claims or accusations.

Farm Loan Banks Attacked

REPRESENTATIVE McFadden, the banker-representative in Congress from the agricultural county of Bradford, Pennsylvania, recently joined in with the special-interest Senators in an attack upon the Farm Loan Banks. Ever since this law was proposed and during all the time it has been in operation there has been a continuous fire of criticism aimed at it by Congressmen who represent the special interests, and especially the money-lending institutions. Bankers, of all people, have no room to cry "favoritism," nor to wail over tax-free bonds, the burden of Representative McFadden's attack.

The money-lending powers have themselves to blame for the Farm Loan Law. The fact that National Bank laws and practices discriminated against farmers as to time and security, and that interest rates on farm mortgages ranged as high as 10 percent, made it imperative that some plan suited to the particular needs of agriculture be adopted. Not only does the Farm Loan Bank provide a uniform and lower rate of interest than the average farmer could obtain heretofore, but it furnishes long-time loans to be paid on the amortization plan—a plan which enables the borrower to pay a stated part of the principle at the time the interest is paid.

The Farm Loan Bank is here to stay. It needs certain improvements in its powers and administration, but these improvements are not likely to come from those who are attacking it. It is senseless for selfish interest to butt its head against the stone wall of public opinion when public opinion is set on justice and progress.

Pork Speculation?

THERE are evidences that some body is "hogging" the pork products market. Of course, live hogs have been selling at good prices during the past year or more, but even when this is considered, the prices of cured pork would seem to be out of all proportion. This is especially true of the prices paid by the people of Europe for American pork. The article of food which, above all others, is needed by the people of war-torn Europe to bring back their lost strength and health is fats, and pork is the logical source of supply. So important is this matter that our government authorities have issued a statement on the subject intended to clear the minds of those who think that pork prices are subject to government regulation. They say:

"We are convinced that there is a great deal of vicious speculation in pork products; it is probably being done in hopes of possibilities of rising prices upon peace and enlarged demands from Central Europe. That such speculation is going on is indicated by the fact that the volume of pork products in stock in the United States is at the highest level ever known at this period. . . . We are convinced that the present price level is one which the producer is only getting part of the benefits, and it is not in his interest in the long run for it will stifle consumption. . . . We are, of course, powerless to interfere in the matter either to put down the present speculation, or to interfere with European regulations."

A leading grain and stock dealers journal, an apologist for food speculators in general, says: "In the name of all that is sensible, why should not prices go sky-high, with only the United States to draw from and since all the world needs fats?" We answer: "Because such conditions breed Bolshevists and anarchists."

Booze Substitutes

WHAT will take the place of booze now that war time prohibition is in force and constitutional prohibition will soon follow? Good food will be more plentiful on the tables of many families that have previously devoted a large part of the "living expense" to liquors. For many, good plain food, but plenty of it, will be a regular substitute. Certain, also, milk will take its place on the soft drink counters, together with larger amounts of butter milk, milk and egg drinks, ice cream and a host of other concoctions that nourish rather than debauch. Michigan cities reported increases of 20 percent in the consumption of whole milk and 50 percent in the consumption of butter milk after the state went dry. Already this tendency is being felt here. The demand for fruit juices for the manufacture of syrups for soda fountain trade is another indication. Contracts are being placed now in trucking sections for fruits next year to be used in this enlarged trade. With meats, grains, milk and fruits taking the place of the departed booze, farmers need fear no unfavorable business effects from the new order of things.

Packer Control

IN spite of numerous Congressional investigations and commission reports on the business methods and economic phases of the meat packing business, there is no crystalization of thought on what should be done with the packers. The nature of their business puts them under suspicion from two sources. The live stock producers believe that they suffer from the manipulation of the "combination of packers" in the sale of their finished animals. The consumers are as certain that they pay tribute to this particular form of big business in unnecessarily high prices on meats. Investigations have revealed conditions substantiating the suspicions of both classes, only to have those reports clouded by claims and counter claims until methods of just control or regulation are obscured.

In a general way it is very evident that the five large companies are in position to control the industry, in spite of their claims to the contrary. Thru control of the stockyards, the packing plants which turn out the bulk of the finished meats of the country, the refrigerator cars which transport the meats to the distributing markets, and finally thru trade agreements with retailers, these companies are in position to influence both the buying price of live animals and the retail prices of meats. Further, the development of the business to include manufacture and trade in fertilizers, stock feeds, canned foods, dairy products as well as the more natural byproducts of the packing business, make the public more apprehensive of this control power. Trade in these other products also serve to defeat the stock arguments of the packers themselves that they make but a small fraction of profit on a pound of meat sold.

On the other hand, the packers have shown that centralization, constant enlargement of the volume of business and careful utilization of the byproducts all tend toward efficiency in which the public participates. They have demonstrated beyond argument that they can do business on a smaller margin than could be expected were the same amount of business divided among a large number of smaller, disassociated plants. We have happily passed the time when big business is persecuted simply because it is big. We are passing the time when centralization of business is persecuted unless it can be shown that such business is taking unfair advantage of its strength and power. The problem with the packers is to retain the advantages of organization and efficiency of centralization, and still protect the public from any abuse of that power. The Kendrick bill, now before Congress, seeks to accomplish this end by three-fold action.

It would compel all agencies engaged in the preparation of meat in interstate commerce to obtain a federal license. As stated by the author of the bill, "the price of this license is honest dealing and good faith. As long as the packer deals fairly with his competitor and his patron, as long as he refrains from unjust practices, he need fear no interference." It would only be when the packers resorted to dangerous conspiracies or abuses that license would be revoked. Second, the bill would compel the packers to dispose of ownership of the stockyards, and third refrigerator cars would be made common carriers. The latter provisions would remove the cause of much of the complaint of the live stock producers and would make transportation equipment available to all on equal terms.

We believe this bill would go a long way in instituting just and reasonable control. It does not aim to hamper industry nor kill private initiative. It does aim to protect the public by prevention of abuses that have been known to exist in the past and which are possible at present.

HARRISBURG LETTER

Men Needed in Fields.—Judging from reports coming to the State Department of Agriculture from the agricultural counties of this state, shortage of labor for the fields is now one of the most serious conditions. In certain regions the conditions are not improved over last summer when, during the height of the war, farmers and growers had to depend upon people unskilled and, in many cases, young and old. There were hopes that the return of the soldiers would bring about better help conditions but apparently this relief has not come. The reports of the state employment service indicate that in industrial centers there are more jobs than men and that places have been going begging. This is largely due to the refusal of men and women to work at the wages offered. In a number of sections the harvest has been delayed by the weather conditions, but it is generally under way in southern counties and the ravages of the pests have not been as serious as feared in the Susquehanna and Lebanon Valleys.

The Milk Problem.—While the state officers from the bureau of foods and municipal officers have been pushing along prosecutions of persons responsible for sale of milk containing less fats and solids than the law allows, and municipal physicians have been watching infection, state officials have been endeavoring to work out some means of dairy inspection which will overcome the duplication of effort between the Departments of Agriculture and Health. There have been instances found where men were overlapping in their work and efforts of officers to abate bad conditions at farms were nullified. It is probable that in the next few months attention to this subject will be given by the executives and that some scheme which will coordinate the service be adopted. Every year or so some plan for consolidation of departments comes along and is shelved without the value of the concentration being studied by the legislature at all.

Great Task Ahead. — Governor Sproul is back in Harrisburg to clean up the more than 600 bills left with him by the legislature and is preparing to act on those carrying the funds and then to put thru scores affecting the state government. This means that the reorganizations of a dozen or more departments will be carried out this summer and an improvement of the business methods in general be undertaken. The governor's task is one of the greatest that has confronted any executive in years. He has to handle the largest amount of money, as far as approval of legislation goes, of any man that has ever been governor; he will have to direct and be responsible for the most extensive reorganization of state government since the constitution became effective and to oversee enormous highways and other public works improvements. On top of all this he will have to inaugurate policies arising out of after-the-war conditions and name a commission to study revision of the constitution.

Growth of Automobiles. — Some figures showing tremendous growth of automobile ownership in the state have been issued by the State Highway Department and they are a startling array of statistics. First and last, there are more than 420,000 trucks and automobiles owned in the state and the total receipts from licenses to July 1 were $4,392,000 with a prospect that by the end of the year over $5,000,000 will be received, all of which is to be devoted to road maintenance. Automobiles owned on the farm are now being listed and it is believed that they will show a marked increase in the half year just closed.

New Laws Effective.—The last week three new laws relative to highways became effective. The code regulating use of motor vehicles, which covers almost everything and definitely establishes speed limits and conduct on the road was approved the first of the month as was the bill regulating the sale of second hand cars which will operate with the Hollingsworth law, making theft of a car a felony, to prevent many stealings. The law requiring all moving vehicles except farm machinery and hay wagons to have lights on the road at night is also effective.

Joint Survey.—Arrangements are under way for the joint survey of all tillable land in conjunction with the United States government. The first step in Pennsylvania will be to get accurate information as to the variety and quantity of all crops produced. Blanks will be issued, but the state authorities beyond announcement of cooperation and a request for aid have not been very illuminating in their statements as to what farmers are to do.

Wasting Stamps.—The amount of "publicity" which is being sent out from the various departments on Capitol Hill these days is costing the state of Pennsylvania a considerable amount of money for stamps, to say nothing of paper. Some of the departments are issuing statements every two or three days and mailing them to anywhere from 500 to 900 newspapers. Search of the newspapers fails to show that a tenth of them pay any attention to the material placed in their offices at state expense. Some days three and even four departments of the State government mail printed or mimeographed matter to newspapers, a duplication which has been going on for some time and which even at two cent postage is something costly. As for returns in the shape of matter published apparently no effort is made to check up. It is comparable on a small scale to the flood of "publicity matter" that went out from Washington during the war, but just what justification there is for spending state money to inform newspapers that "most people would be in better health if they made a practice of eating more of the fresh green vegetables now available" and quoting poetry is hard to see. A vegetable diet is being urged by every medical man these days and every housekeeper can find the fruits covered in the mail from Capitol Hill without assistance of the state.

Await Action.—Approval by the governor of the legislation and plans for the new Bureau of Markets are now needed to make this branch of the government effective. Committees are at work on standards and some steps to get into working order cooperative organizations so that the state may get an example will follow. Some fine predictions have been made for the new bureau and its expansion will be undertaken just as soon as a new chief is named.

Enforce Dog Law.—Now that it is certain that no change is to be made in the dog law, some vigorous enforcement is to be undertaken in several counties where sheep raising is under way so that complaints of laxity may be overcome. State game and agricultural authorities have secured the cooperation of the State Police.—Hamilton, Harrisburg, Pa., July 7.

NEW YORK LETTER

Market Notes.—The season's first home grown tomatoes appeared on the Syracuse public market this week at 35c a quart. A small offering of the first home-grown raspberries brought 28 cents. Strawberries are at the end of the season, the very last pickings bringing 25 and 30 cents a quart—tho the growers sold the last before this, at 10 cents a quart to save themselves loss on a full market. Early home-grown cabbage is appearing in Onondaga County at $1.50 a dozen heads. Poultry prices remain firm, 45 cents in crate lots and 50 cents a pound at retail on the Syracuse market for fowls, 34 cents in other markets. Broilers have dropped to 45 and 50 cents a pound. Veal brings 25 cents for fancy stock. Eggs are 50 cents at groceries, 48 cents wholesale, butter 60 cents. At Watertown there is a big crop of strawberries both wild and cultivated now in their prime. Peas are plentiful, the canneries being very busy. Early peas show a fair growth of vines considering the dry weather and are setting pods nicely. The usual price paid by canners to farmers is 3½ cents a pound for the shelled peas.

Riotous Booze Celebrations.—The close of June saw riotous celebrations in Syracuse, New York City and other wet sections. The two former declare they will continue the sale of liquor and stand trial for illicit sales. Officials are much in the air and the brewers stand back of the saloon men. Six hundred liquor dealers of New York will fight in the courts and there is much stock on hand they will attempt to dispose of.

Cheese Improves.—Both the price and quality of cheese improved with the cool weather of last week. The Watertown dairy board received 30⅛ cents, against 29½ cents of the week before. There were 9,374 boxes sold.

Sugar Shortage.—Housewives and ice cream parlors are unable to secure enough sugar for canning and other purposes. Merchants say the shortage is temporary. Many grocers have no sugar, while others are limiting sales to two pounds per person.

Practical Demonstrations. — The State Department of Agriculture is arranging for a series of tractor demonstrations and farm machinery exhibits in ten counties. The first one will be held near Utica July 24 and 25, with areoplane flights to help secure a crowd.

New Education Commissioner. — Frank D. Gilbert, of Albany, has been unanimously elected by the Board of Regents as successor to Dr. Finegan, who has resigned as assistant commissioner of education to head that work in Pennsylvania. Mr. Parker will assume the legal and legislative work of the department and Geo. M. Wiley will assume the educational work previously done by Dr. Finegan, until a change can be made in the appropriation bill so as to make possible the permanent filling of the position.

Seasonable Notes.—Nassau County farmers report locusts in such numbers that the trees are denuded and the buzzing is such as to disturb sleep at night. State entomologist, M. D. Leonard, is there taking specimens. It is feared the crops will suffer next. Corn has made remarkable growth during the hot dry weather. An Owaxco farmer shows corn that made 52 inches growth in 35 days. Haying is being rushed by farmers with a fine crop on the new seeded meadows light crops on old ones. Onondaga sheep growers have sold 10,000 pounds of wool to a local dealer at a good price.

More Economy Postal Rulings.—Postal officials of Syracuse and other cities are indignant at the recent orders to "reorganize routes and reassign duties" cutting out many city letter routes; also to have carriers and clerks take their vacations in the first months of the year when the work is lightest and to shift the extra work on to the rest of the force during vacations of carriers, instead of hiring substitutes as heretofore. As there is no harder worked class than carriers in general the orders have stirred up much wrath. Of the 75,000 questionaires sent out to farmers by the State Grange and the Farm Bureaus, S. J. Lowell, master of state grange, and in charge of this work, reports 80 percent of the returned papers showing decided dissatisfaction. The people are urged to return the papers promptly, even on routes changed during the war, that this evidence may be placed before the Congressional sub-committee in Washington July 8. Several more county granges have taken unanimous action protesting the present service. Cayuga County farmers are victorous, as a visit of postal inspectors showed routes 33 to 35 miles long and a physical impossibility to give service—farmers' mail being delayed 3 and 4 days. The result was a complete restoration thruout the entire county.

Help For Farmers.—L. A. Pyle, federal agent for farm labor, has been in consultation with the Farm Bureau Agents of the State, and is furnishing farm laborers, as many as 60 being sent to some counties already. Application blanks for laborers may be had at farm bureau offices, and they cover a wide range of needs along the line of farm help, the duties required, and the privileges given help. Wages expected for single men run from $40 to $60 per month, with keep.—F.

NEW JERSEY NEWS

Lack of Rain Serious.—The rain situation in southern parts of the state has assumed serious aspects, as the rainfall for the past five weeks has been totally inadequate for crop needs. Farmers and produce raisers are reporting that the sun is burning up their products, which will mean that they will be lesser in quantity and lesser in quality if the condition continues. Corn, potatoes, oats and grass are suffering noticeably, and the transplanting of tomatoes for canneries and the transplanting of peppers are being delayed because of the dry spell. The onion harvest is now in progress with fair results, while the harvest of rye and wheat has been started along with the digging of potatoes. Sweet potato vines are growing very well. Progressively toward the northern portions of the state crop conditions are better owing to less heat and more frequent and copious showers. There will be some loss from lodging of wheat and unfavorable haying weather, but on the whole the hay crop will be fair to good. Pastures are very good. Corn, potatoes, rye and oats look very well, oats are heading, wheat is beginning to ripen, barley needs rain and spring wheat is heading nicely. Raspberries are fairly good and blackberries indicate a large crop.

Modern Marketing Methods For Potatoes. — The Farmers' Co-operative Association of Mercer County has secured the sales service of the North American Fruit Exchange for the marketing of potatoes in car lots this season. In order that the growers may understand the advantages of this system public meetings were held during the week at Allentown, Hightstown and Plainsboro. C. E. Bassett, recently connected with the United States Bureau of Markets and a national authority on marketing, delivered the principal addresses at the meetings, which were largely attended by potato growers and their families.

Recreation Dock for Municipal Dock Marketmen.—Trenton City officials, who during the week opened with signal success the first municipal dock market in the history of the city, are planning to open a recreation deck on the top of the municipal dock here adjoining the fifty stalls that are being used by the farmers in the sale of their produce in wholesale fashion to dealers located in various parts of Trenton. The dock will enable the farmers to get the fresh air from the Delaware River while they are awaiting the time for the opening of the market. This will be a big improvement over former conditions.

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WHAT DOES IT COST TO PRODUCE MILK?

(Concluded From Page 1.)

their herds on a better business basis, and in gathering the data thru his records that enabled them to secure a more equitable price for milk.

Labor.—The labor record, as shown in the first blank illustrated is filled in carefully by the cow tester, month by month, and shows the amount of labor consumed in various operations. By the illustration it is noted that the labor for milking, feeding, cleaning stables, and cows, hauling milk two miles to shipping stations, washing dairy utensils, driving cows to and from pasture, hauling feed, and for miscellaneous purposes for the herd of 19 cows, totaled 5,105 man hours for the year and 1,712 horse hours. This is an average labor requirement per cow per year of 269 man hours of work and 90 horse hours.

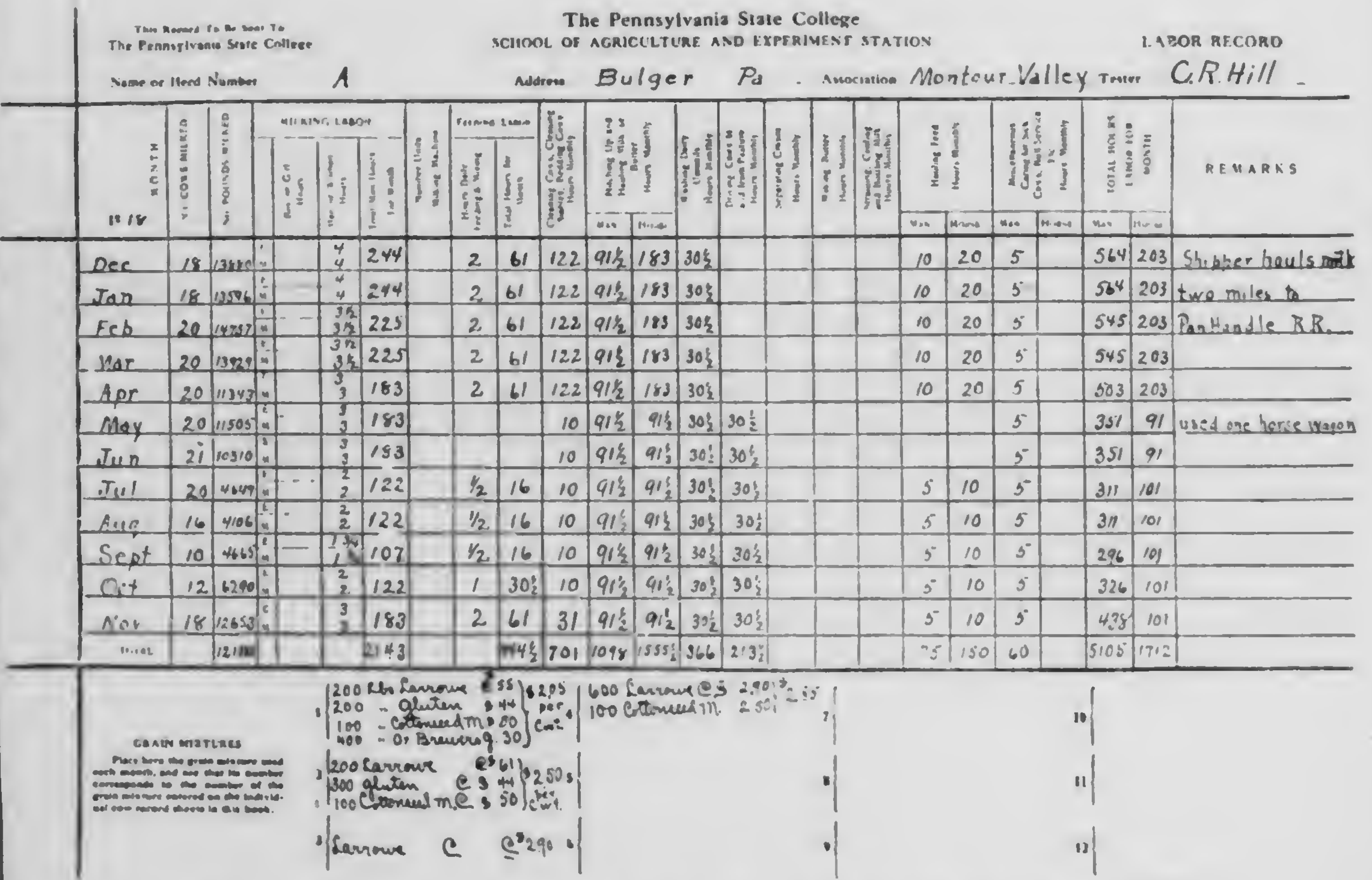
Inventory.—The inventory of live stock, as shown by the second blank illustrated, is filled in at the beginning and end of the year in order to find the average amount of capital equipment in the case illustrated is $215.07, and the depreciation during the year is $69.85. The average value of the buildings is $3,370, and the depreciation $60.

Current Expenses.—Current expenses for the year, including repairs, insurance, taxes, veterinary service, and other items are recorded in the space provided, and are totaled at the end of the year. In the case illustrated it is seen that the current expenses for this particular herd for the year amounted to $390.60.

Capital.—The capital included the various amounts invested in buildings, live stock, equipment, feed and supplies. These sums are transferred from other places and grouped under capital. Interest at 5 percent is allowed as a fair return on the money invested. In this case the total capital is $8,372.57. The interest on this sum amounts to $418.63.

Receipts.—Receipts from products other than milk in the dairy are assembled and totaled. These include any increase in inventory, the value of calves, sold as of three days of age, and the value of the manure milk, which was the amount yielded by this herd in a year. This makes the final cost of producing 100 lbs. of milk $3.86, and the cost of one quart of milk at this particular farm $.083.

Before this milk reaches the consumer in the city there must be added the transportation charges and the cost of pasteurization and distribution. On some farms the cost of producing milk will be greater and on some less than that of the herd whose record is shown. This particular herd was used to illustrate the system by which accurate cost of production records are being kept in the cow-testing associations in Pennsylvania. The data from a number of associations is now being summarized. When this work is completed it will show the average cost of producing milk in different sections of the state, and will be given the readers of the Pennsylvania Farmer at a later date.



This Record To Be Sent To The Pennsylvania State College

The Pennsylvania State College
SCHOOL OF AGRICULTURE AND EXPERIMENT STATION
LABOR RECORD

Name or Herd Number A Address Bulger Pa. Association Montour Valley Tester C.R. Hill

MONTH 1918	No. COWS MILKED	No. POUNDS MILKED	MILKING LABOR					FEEDING LABOR											TOTAL HOURS LABOR FOR MONTH		REMARKS
											Man	Horse					Man	Horse	Man	Horse	Man	Horse	
Dec	18	13880		4 4	244		2	61	122	91½	183	30½					10	20	5		564	203	Shipper hauls milk
Jan	18	13596		4 4	244		2	61	122	91½	183	30½					10	20	5		564	203	two miles to
Feb	20	14757		3½ 3½	225		2	61	122	91½	183	30½					10	20	5		545	203	PanHandle R.R.
Mar	20	13929		3½ 3½	225		2	61	122	91½	183	30½					10	20	5		545	203	
Apr	20	11343		3 3	183		2	61	122	91½	183	30½					10	20	5		503	203	
May	20	11505		3 3	183				10	91½	91½	30½	30½						5		351	91	used one horse wagon
Jun	21	10310		3 3	183				10	91½	91½	30½	30½						5		351	91	
Jul	20	4649		2 2	122		½	16	10	91½	91½	30½	30½				5	10	5		311	101	
Aug	16	4106		2 2	122		½	16	10	91½	91½	30½	30½				5	10	5		311	101	
Sept	10	4665		1¾ 1¾	107		½	16	10	91½	91½	30½	30½				5	10	5		296	101	
Oct	12	6290		2 2	122		1	30½	10	91½	91½	30½	30½				5	10	5		326	101	
Nov	18	12653		3 3	183		2	61	31	91½	91½	30½	30½				5	10	5		438	101	
Total		12188			2143			444½	701	1098	1555½	366	213½				75	150	60		5105	1712	

GRAIN MIXTURES

Place here the grain mixtures used each month, and see that its number corresponds to the number of the grain mixture entered on the individual cow record sheets in this book.

1. 200 lbs Larrowe @ $55, 200 – Gluten $44, 100 – Cottonseed M. @ 50, 400 – Or Brewers G. 30 — $2.95 per Cwt.
2. 200 Larrowe @ $61, 300 gluten @ $44, 100 Cottonseed M. @ $50 — $2.50 per Cwt.
3. Larrowe C @ $2.90
4. 600 Larrowe @ $2.90, 100 Cottonseed M. 2.50 — 2.85
7.
8.
9.
10.
11.
12.

No. 1—Showing Labor Required in Caring For a Herd of 19 Cows For a Year

invested during the year, and to determine whether there is an increase or decrease in the value of the live stock on hand at the close of the year. The illustration shows that $3.523 worth of live stock was on hand at the beginning of the year, and $4,050 at the close of the year, or an average investment of $3,787.50. In determining the decrease in inventory the value of livestock at the end of the year plus the amount sold is subtracted from the value of the live stock at the beginning of the year, plus the amount purchased. In this case it is found that the decrease in inventory amounts to $190.

Equipment and Buildings.—An inventory of equipment and buildings is taken at the beginning and end of the year. The equipment is valued at its present farm value; that is, the original cost less the depreciation that has taken place during the length of time the equipment has been used. Only such a part of the value of the building is inventoried to the dairy as is chargeable to its account. The average value of the from the herd. In the case cited these sums amount to $367.27.

Summary.—In the summary the current expenses, feed costs, labor costs, hauling costs, interest and depreciation and decrease in inventory are grouped and totaled. The sum of these costs, amounting to $4,643.17 in the instance cited, gives the total cost of the dairy herd for the year. From this amount is deducted the credit for returns other than milk $367.27. This gives a net cost of $4,275.90 which represents only the bare cost of feed, labor and overhead expenses. The farmer has received no pay for his work as manager in conducting an enterprise requiring considerable skill and business ability. The Committee on Standardizing methods of Investigating the Cost of Milk Production, appointed by the Office of Farm Management, Washington, D. C., recommends that 10 percent of the net cost be allowed as a fair wage for management. Adding 10 percent to the net cost gives $4,703.49 as the final cost of producing 121,883 pounds of

DAUPHIN COUNTY TEST RECORDS

The First Dauphin County Cow Testing Association in closing records for its first month shows 26 cows with records of 40 pounds of butter fat or more. There were five cows with records in excess of 50 pounds and one with 65.2 pounds of butter fat for the month. The high cow is owned by W. M. Peters who had three other cows over the 40-pound mark. Mr. A. B. Shenk had five cows on the honor roll; E. B. Mitchell and C. E. Cassel had three each; Joseph Brandt, H. Speece and C. Obercash had two each, while J. Lenker, S. T. Whitmer, Ed. Swope, Robert Bell and Dr. Kirkpatrick had one cow each among the honor cows.

H. G. Niesley, Dauphin County Farm agent, under whose direction the association was formed, calls attention to the fact that many of the members have fall cows, and thus do not show among the record makers the first month. Very good records are looked for later in the year when a larger proportion of the cows are in full production. The yearly records will determine which are the best cows in the 26 herds represented in the Association.

FORCING A REST

We frequently hear the expression "Yes, I have a cow that wont 'stand' dry." This is simply nonsense or lack of knowledge of how to dry a cow. I have yet to see the cow that would not go dry at the proper time if handled properly.

About seven weeks before a cow is due to freshen, lessen the amount of her feed. She may be a high yielder. If her milk does not slacken, keep on milking her twice a day. In such a case decrease her feed until she does slacken; then milk only in the morning. Milk her once a day for several days and then stop milking her. If she still has plenty of milk, stop her short feed off altogether and milk out a part but not all of her milk. Do this two or three times, and you will find that she will decline in milk flow but it need cause no concern on your part. About three days after she has become totally dry, begin feeding her again, gradually increasing her feed until she gets almost as much as she did before you commenced drying her. This will help the calf and the cow will be ready to do her best.

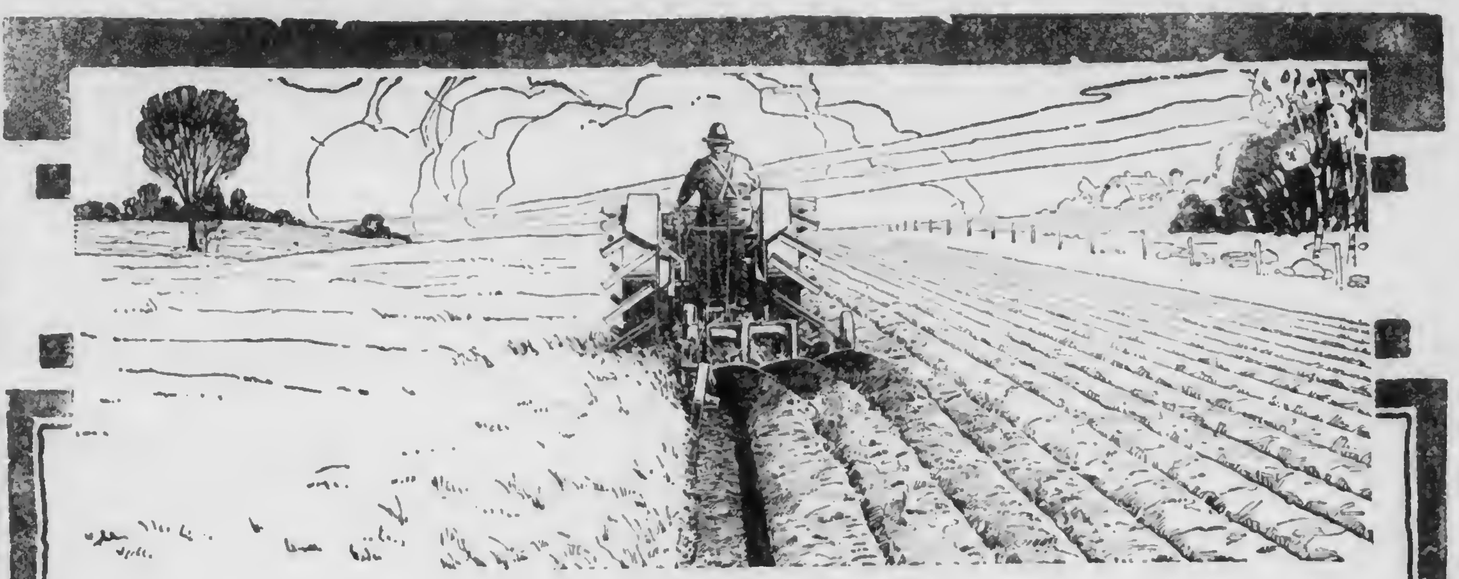
Here is where the average farmer makes the mistake? If, when the feed has been considerably slackened and she still gives a great deal of milk, instead of letting her stand altogether or milking part of her milk, as they should, they continue to milk her clean. Of course, in this way some cows will continue to give some milk until the colostrum shows.

I believe that a cow should stand dry for about five weeks, or a little longer. This is not too long. There are many, tho, who claim that a cow should be milked as long as the amount of milk obtained makes it worth while. I have learned by experience that they should not. There was in our stable a young cow having had her second calf. She gave forty pounds a day. She kept this up almost without slackening for about eight months. I kept a record of her time but in computing the date on which she would freshen I made a mistake of one month. Because of this error, she was milked until her milk became "ugly." Three days, after she was left standing, she dropped her calf. She fell way off in production for the year. With the best of feed and plenty of grass, she did not come back to her previous production.—R. I. W., Richland.

LACK OF ICE CAUSES DAMAGE

The Dairymen's League calls attention to the fact that the dealers, the railroads and the farmers are having all kinds of trouble in cooling and preserving the milk owing to the great shortage of ice. The open winter made it impossible in many sections to put in an adequate supply, and there are many farmers and dealers who have no ice. This makes it necessary to cool the milk by water which is on some farms almost an impossible task. The result is that thousands of cans of milk are being refused at the stations.

Even if the milk reaches the station in good shape, the dealers and the railroads are also short of ice, and there is a tremendous loss with sour milk when it reaches the city. Farmers are helping the situation some by taking extreme sanitary precautions and by getting the milk into cold water as soon as it is drawn from the cow, so that the bacteria in the milk which helps to sour it is kept at a minimum.



Good Plowing, Yes—

GOOD work and plenty of it, whether plowing, disking, harvesting or belt work, is the rule where an **International or Titan kerosene tractor** is used. With it you can plow as deep as you want to, as fast as good plowing can be done, do any other farm power work, do as much and as good work during the last hour of the season as during the first, and know that you are saving money at every turn of the flywheel.

Work With All Farm Machines

The steadiness and dependability of International or Titan tractors are due, not to chance, but to skill and experience. We know farm machines, having marketed them for close to 88 years. We know the work you expect your machines to do and for twelve years have been selling tractors designed and built to furnish useful, economical power for that work. One or another of our tractors will draw or drive any farm power machine you have, requiring power up to 15-H.P. draw bar or 30-H. P. on the belt, and do good work with it.

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All tractors of the same size use about the same amount of fuel. It is not uncommon to use 1000 gallons in a season. International and Titan tractors operate on common coal oil, which costs about half as much as gasoline. Even if our tractors were superior in no other way, the fuel saving would make it worth while to own an International.

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Every tractor owner needs service at one time or another. When that time comes our Service Organization of 89 branch houses and thousands of dealers responds quickly. Think what it may mean to you in a rush season to get a repair part or have an adjustment attended to within a few hours. Every International or Titan tractor owner who needs service gets it without unnecessary delay or trouble.

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Belt Machines
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Cultivators
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Ensilage Cutters
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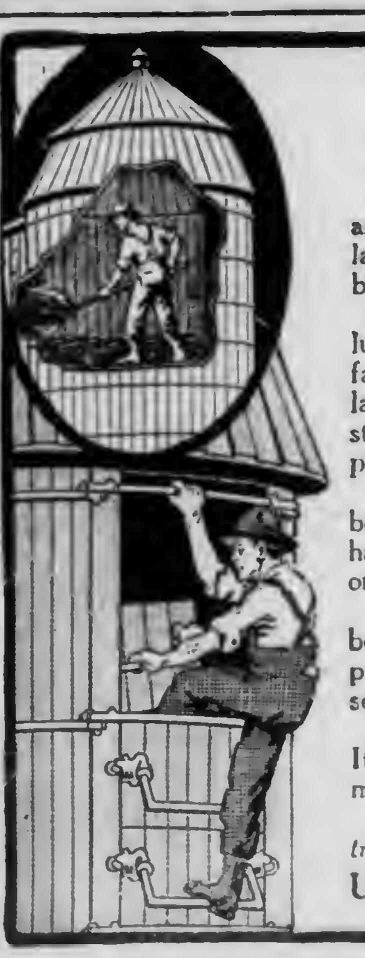

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You wish to improve your farm,
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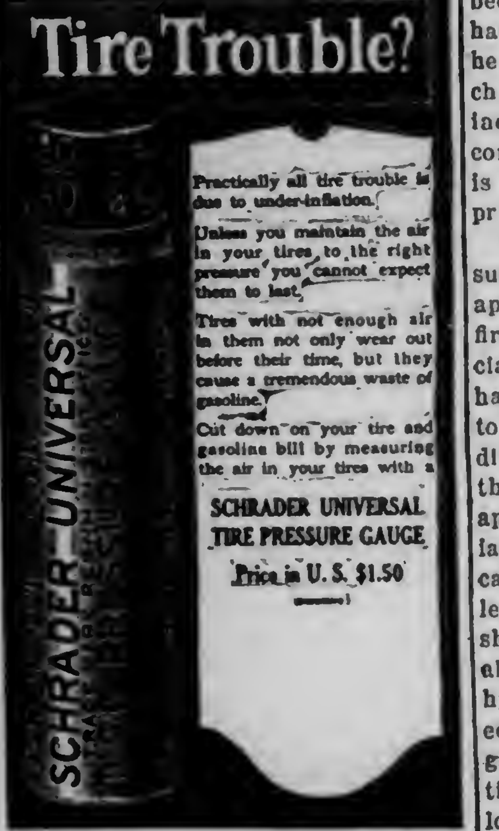

Practically all tire trouble is due to under-inflation.

Unless you maintain the air in your tires to the right pressure you cannot expect them to last.

Tires with not enough air in them not only wear out before their time, but they cause a tremendous waste of gasoline.

Cut down on your tire and gasoline bill by measuring the air in your tires with a

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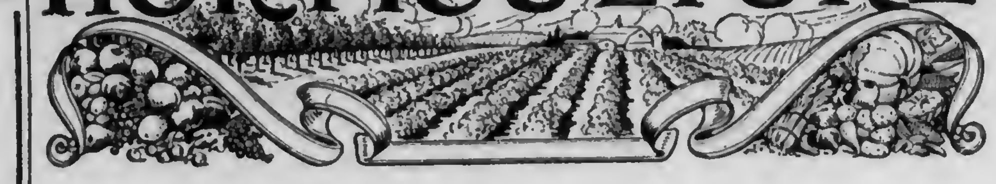

SUMMER SPRAYS

By J. P. STEWART

Judging from the recent Federal estimates, the apple and peach crops this year will probably be about twenty percent less than the crop last year, when the prices for apples, at least, reached record-breaking heights. In many of the apple sections, moreover, the weather has been very wet and cool, which has been very favorable for scab and similar fungous diseases, and they have naturally reduced the condition of the fruit now present. Both of these facts make it especially advisable for all those who have fruit now on the trees to give especial attention to its proper protection so as to insure as full and perfect a crop as possible. I know one man who was in special need of a maximum return from his fruit last year, who applied no less than six sprays to his apples during the growing season. He admits that some of them may not have been needed, but he simply had to have a crop of first class fruit, and he could not afford to take any chances. The way he felt about his individual crop last year should become much more general now. This is desirable from public as well as private considerations.

This means that the so-called late summer spray, which is commonly applied about the last of July or the first of August, should receive special attention this year. If the fruit has received reasonably good care up to the present time, this one additional application should be all that is needed, unless bitter rot or apple blotch is present. The materials commonly needed for this application are lime-sulphur solution and lead arsenate. The lime-sulphur should be applied at a density of about 1.008 on the specific gravity hydrometer. This density is obtained by using about one and one-third gallons of the best commercial solution or about one and two-thirds gallons of the average home-made solution in making fifty gallons of spray. The lead arsenate should be added to this at the rate of about one and a quarter pounds of the powder or two and a half pounds of the paste to fifty gallons of spray.

If the bitter rot or the true apple blotch is present, it may be well to substitute bordeaux mixture for the lime-sulphur and make one or two additional applications at intervals of about two weeks or oftener if the infestation is very severe. Four pounds of lime and four pounds of copper sulphate, or blue stone, to fifty gallons of spray material will be ample for this purpose, and three pounds of each will do if applied with sufficient thoroness. Lead arsenate should be added at the same rate as above. If it is not convenient to provide the bordeaux for these applications, the lime-sulphur can be used with reasonable assurance, as I know several important growers who use it entirely, but I would prefer to use it at about a fourth greater strengths than those named above for ordinary conditions

In this connection it may be well to repeat our previous warnings against the substitution of any of the "soluble sulphur" powders in this application, unless they specifically state that they are made of lime sulphur. Practically all these powders now on the market are made of soda-sulphur instead of lime-sulphur, and the addition or presence of any soda compound in a liquid spray material containing lead arsenate or any other of our common arsenicals, is very dangerous. This is because the soda tends to make the arsenic soluble, which is likely to be disastrous to both foliage and fruit on either the apple or peach. The true lime-sulphur powder now available on the market is also less certain in its action than the regular lime-sulphur solution, on account of its uncertain solubility. If it is used, therefore, enough should be added to give a solution of approximately the same density as that named above for the sulphur solution. This is likely to make it relatively expensive as compared with the solution.

A Handy Picking Ladder

Peach Spraying

Peach spraying is rarely as much of a success as the right kind of apple spraying. In other words, one can omit an application or so on the peach with a much clearer conscience than on the apple. Where previous experience has indicated the real need of special protection, however, it is certainly advisable to make some provision for either spraying or dusting. Incidentally, it seems to the writer that there is much more hope for the dusting practice in the case of the peach than the apple. The scab and brown rot fungi which attack the peach are much more easily killed than most of those which attack the apple, which presents an easier task to the dust, and there is always more danger of the sprays causing some injury to the peach itself. For those equipped to dust, therefore, we would suggest that they use it freely on their peaches, whenever the need is apparent.

For those not so equipped, we prefer an application of plain lime and lead arsenate, at the rate of two to four pounds of the former and about one pound of the powdered lead to fifty gallons of spray, at least for the first spray. It is intended primarily to clean up the curculio, and should be applied as soon as the shucks are shed. The lead arsenate however, will also control the fungi to a considerable extent, so that this combination may be all that is needed where the conditions are rather favorable. Where this is not the case, a regular fungicide may be needed, and there is nothing better as yet than the "self-boiled" lime-sulphur, or its equivalent, the "atomic sulphur."

The former is made on the 8-8-50 formula, which means eight pounds each of lime and sulphur to fifty gallons of water. To make it, the lime is started slaking and the sulphur is then added with enough additional water to keep the lime slaking properly. The whole mixture is kept stirring thoroly and allowed to heat from the slaking until the slaking is completed or until a noticeable quantity of reddish sulphids are formed on the surface, whereupon the remainder of the water is added to bring it up to fifty gallons, the arsenate is added, and the material is ready for spraying. This combination should be applied about a month after the first spray, wherever the rot and curculio are bad, and the fungicide alone should be repeated about a month before the fruit ripens, where the conditions demand it. Sometimes the last applications sticks to the fruit to an objectionable extent and mars its appearance on the market. It may therefore well be omitted, unless conditions are especially favorable for the rot, or a less staining fungicide which is safe may be substituted.

SMALL FRUIT CROP IN WESTERN NEW YORK

Fruit crop prospects in Central and Western New York are becoming less encouraging as we approach midsummer. Extensive investigations of orchard conditions in this great fruit belt lead me to believe that the Federal government's estimate of a 52 percent apple crop is too high. Several Niagara County growers say they will have one-quarter of a full crop, while a leading Wayne County apple grower estimates his crop at 30 percent of the average yield. Fifty percent is a fair estimate. Conservative growers are inclined to the opinion that the crop of merchantable fruit will be considerable less than that figure. Baldwins, the standard apple of this section, will be a light crop. The Greening trees bloomed heavily, but the set is disappointing, and other standard sorts are little, if any, more promising.

Apple prices will be high next fall. This is the prevailing opinion of growers and dealers. They say the commercial market is reflected in the evaporated apple futures, October-November delivery, with prime white stock selling up to 21 cents a pound. In past years 10 cents was a high price.

The government's estimate of a 65 percent peach crop will not hold good in the Lake Ontario fruit belt. B. J. Case of Wayne County, a former president of the New York State Fruit Growers' Association, has read a careful survey of orchards in the district east of Rochester, and has found that peaches will be only a 50 percent crop, while in Niagara and Orleans the condition is not over 40 percent. These counties have not only had a heavy decrease in acreage during the last two years, running from 25 percent in Niagara to 50 percent in Wayne, but the yield is light. Instead of 6,000 cars of peaches predicted by the government for the Western New York territory, some growers think that the crop will be nearer last year's crop of 1,100 cars. It is reported that sales have already been made by growers at $3.50 a bushel.

Mr. Case reports that cherries are almost a total failure, and pears and plums will each be 50 percent of a full crop. Other growers consider this a too liberal estimate.

Strawberries have been a good crop in some sections, in others a light yield is reported. As high as 35 cents a quart, has been paid, the highest price the growers have ever received. Raspberries are yielding a fine crop, the rains having helped to develop the fruit. One Wayne County grower will harvest about 50,000 quarts, which will bring 20 cents a quart, making a $10,000 crop. The currant crop is far below the average. The grape crop will be large in some sections, and the average will be little if any below normal.

All kinds of fruit are bringing unusually high prices and the growers who are fortunate enough to have a crop to sell are making larger profits than in years of bumper yields.

Peach curl has become a serious menace in some of the fruit orchards in the fruit belt between Rochester and the Niagara River. Little can be done to stay the progress of this disease until the dormant period arrives next fall, when thoro frequent sprayings will be required. As it is now, the trees have cast their leaves and must now put out new foliage from the dormant buds that nature holds in reserve for emergencies. However, under such conditions, the trees are practically certain not to form fruit buds for the next season, so that it will be at least two years before the effects of the curl epidemic are outgrown. The brown rot has been found in many orchards, and not withstanding the efforts made to control it, much injury will be done to the crop from this disease.

Co-operative associations to operate central packing houses are being formed in a large number of fruit growing communities thruout Western New York. These organizations will standardize the fruit pack, which will be sold under a county organization brand. At the present rate of development of the movement it is probable that within a short time the larger part of the fruit grown in the orchards of this territory will be prepared for market in central packing houses.—E. E. R.

TO CHECK CELERY BLIGHT

Celery blight may be controlled by spraying the plants and beds with Bordeaux mixture and by destroying the diseased plants as much as possible.

Bordeaux mixture is made with four pounds of copper sulphate, four pounds of quicklime and 50 gallons of water. This material has been used with success by gardeners on young seedlings. For best results the leaves must be well covered with the spray.

Burning diseased plants and leaves aids in the control of celery blight. Trash or weeds left on the celery plots may harbor the disease over winter.

Southern tomatoes are firm. Florida stock has been rather poor but good Mississippi tomatoes in four till carriers are quoted in New York at $1.50. New Jersey crop prospects seem good.

Profit on This Year's Potato Crop

PREPARE to handle it with speed and certainty with an IRON AGE Digger. Breakdowns and delays are costly when you are hurrying to catch a high market and have a gang of pickers waiting. You cannot afford to take chances with any digger that hasn't every one of the following features and the world-wide reputation of the IRON AGE.

IRON AGE Traction (wheel-driven) Diggers astonish and delight with their thorough separation of potatoes from the soil and trash. You can throw these diggers in and out of gear from the seat and avoid scattering the potatoes when turning. The patented Automatic Foretruck permits short turns without upsetting or straining, climbs furrows, PERMITS BACKING, holds machine over the row and at even depth. Stone fingers prevent clogging of elevator in stony ground. Flanges and washers keep sand and dust out of bearings.

Where the acreage justifies an engine digger, the IRON AGE Engine Digger is sure to please. Furthermore, it doesn't take a very large acreage to justify this machine when you consider that its "New Way", Cushman or Fairfield engine can be used on your Iron Age Sprayer or otherwise about the farm. This machine digs fast, saves two horses, and keeps operating costs down. It is the only machine that is equipped with an absolutely dependable Automatic Throwout Clutch that protects against breakage from obstructions that occasionally stop the elevator.

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$1.25 worth saves $20

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Send $1.25 for enough Shoo-Fly to protect 10 cows 2 weeks, also our 3-tube gravity sprayer. Money back if not satisfactory. Name Express Office. Booklet FREE.

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Farm Products Prices and Prospects

SHIPMENTS OF AMERICAN DAIRY CATTLE TO FRANCE

Following the recent arrival from France of a commission to negotiate for several thousand head of dairy cattle, the United States Department of Agriculture points out how breeders in this country may help the farmers of France and likewise benefit the animal industry of the United States. The number of cattle to be supplied will depend upon the ability of American dairymen to furnish sufficiently good animals at the prices the commission is prepared to offer.

The department has received notification, says the Weekly News Letter of the Department of Agriculture, that probably 3,000 cows and heifers will be purchased the first month, and the number will be increased if the animals are satisfactory. The publication continues:

This is the second purchase of dairy cattle for the devastated regions of France; the first, last April, consisted principally of 104 pure-bred and grade cows and 4 pure-bred bulls purchased by the French High Commission. That importation by France was in the nature of a trial order. Those cattle and the others which will be obtained are to be used as foundation herds for the devastated sections of France. Two percent of the total shipments, as specified by the French officials, are to be bulls.

VALUE OF PENNSYLVANIA CROPS

The estimated total value of the crops raised in Pennsylvania in 1918 was $376,927,782 which was an increase of 50 percent over the estimated value of 1917 crops. The items making the 1918 total follow:

Barley	$ 578,452
Buckwheat	10,249,104
Corn	103,496,892
Hay	110,825,114
Oats	35,910,392
Potatoes	37,564,590
Rye	7,768,715
Tobacco	14,510,850
Wheat	56,023,673

CORN BORER MENACE INCREASES

The territory infested by the European corn borer continues to widen in New York state. The insect has been found in five counties, Schenectady, Montgomery, Schoharie, Saratoga and Dutchess. The efforts of the State Department of Agriculture to control the pest have apparently been unavailing, altho many men have been employed in the work of extermination, and tons of stubble have been saturated with oil and burned.

At this time little actual work can be done to keep the pest in check, but extensive plans are being made by the state officials for a war of extermination against the borers the coming fall.

Commissioner of Agriculture Charles S. Wilson has arranged a conference of commissioners of agriculture of the corn producing states, to be held at Albany, some time in August, for the purpose of discussing the question of control of the pest, which is threatening the corn crop of the entire country. Commissioner Wilson says there is no effective means of destruction except the collection and burning of the stalks and stubble, and this is expensive.—E. E. R.

ARSON LAWS MORE EFFECTIVE

Arson laws in two states, formerly containing loopholes for the incendiary, under certain conditions, have been amended during the past year as a result of the efforts of the Committee on Incendiarism and Arson and a digest of the arson laws of other states is now being prepared. This will contain suggestions for amending those acts which are considered antiquated and inadequate to deal properly with the crime.

A Gas Engine on This Digger Would Release Two Horses

The committee's records for 1918, covering all but six states, show a total of 441 convictions for arson and burning to defraud. The motives which actuated the guilty ones have been subdivided as follows: revenge, 87; pyromania and other forms of insanity, 156; concealing crime, 26, and defrauding the insurer, 172.

The list does not include juvenile court cases covering instances of malicious mischief, weakmindedness or mania for excitement.

The committee has paid special attention to the activities of pyromaniacs and those suffering from other forms of insanitay. Another phase of this committee's work has covered the investigation of the watchman service in a nnmber of large plants.

HOGS AT HIGHEST PRICE

Hogs on July 1st, commanded the highest price ever known at this time of year—$21.75 a hundredweight. The previous topmost July record was last year, $19.40. Today's strength in the hog market was ascribed chiefly to export demand for packing house products.

Before the United States entered the war, $10.25 was the acme for hogs in July.

POTATO IMPORTS FROM CANADA

From July 1, 1918, to April 30, 1919, the United States imported 1,827,377 bushels of potatoes from Canada, most of this since November 7, the date on which the reciprocity agreement went into effect. Our total exports to Canada during the same time were 536,508 bushels, of which 300,467 bushels were exported before November 7.

BUYING WHEAT

The chief thing about the new Grain Corporation contracts is the country buying basis. In a few words the conditions are these: "All wheat buyers under contract with the Grain Corporation must follow Federal grades as closely as possible. They must establish No. 1 wheat as their buying basis; then deduct 3c for No. 2 and 7c from the No. 1 for No. 3. Grades below No. 3 must be bought on their merits at prices that will reflect their commercial value as compared with No. 1. Buyers will determine their minimum buying price on No. 1 by taking the price of No. 1 advantageously reached (freight rate and Grain Corporation price alone determining that advantage) and deducting from it freight and war tax, and then further deducting an amount that will represent a reasonable handling margin."—Price Current.

IMPORTS OF MEAT AND GRAIN

During the week ended June 14th, 141,846 bushels of corn arrived at New York from Argentina, intended for domestic consumption. This amounts brings the total receipts of corn up to 2,225,050 bushels.

BUILDING A SEWAGE DISPOSAL SYSTEM

(Concluded from Page 3.)

or siphon pipe. This pipe has a U-shaped construction, with the supply end longer than the discharge end. The bend in the pipe always remains full of liquid. As the liquid enters the dosing chamber and rises around the bell it compresses the air which has filled the bell and is held there by this incoming liquid. Finally this pressure becomes so great that the air in the bell is forced down the long leg of the "U," forcing the water up in the short leg. Pressure becomes great enough to force a few bubbles of air past the curve in the "U," relieving pressure in the bell which is immediately replaced by an inrush of liquid from the chamber, which then starts the siphon. This soon empties the dosing chamber, leaving the siphon leg full of liquid as the siphon ceases to perform, on a level with the outlet and ready for a repetition of the operation.

The automatic siphon cannot be constructed at home because it requires skilled workmanship in order to make it operate accurately. However, it may be obtained from several reliable dealers at prices varying from $15 to $20, depending somewhat upon the size desired. These companies give complete and detailed information concerning the installation of their product.

The Tiling System

The purification filter bed or tiling system leads off from the siphon. Four-inch tile should be used and with this size tile one foot of tile should be allowed for every gallon capacity of the second tank, or, for a family of five, a total system of 225 feet should be laid. Never allow a greater slope than two inches in every 100 feet, for greater slopes do not allow sufficient seepage to take place.

Upon the nature of the soil will depend the depth for laying the tile. If the soil is porous, a maximum depth of 16 inches may be used. If it is not porous, lesser depths are better. Tile may be laid in very irregular courses but the course illustrated is most commonly used. In case of a heavy soil, such as clay, it is best to use a double system, such as is illustrated by dotted lines and in the cross section of the tiling system. Allow two feet per gallon as the capacity for the double system and place the lower system about 8 inches deeper in the ground. It is then safe to drain this system into any nearby stream. In laying tile, allow about one quarter inch between them to allow for seepage.

In the tiling system is the only place where purification takes place and in order for purification to take place the soil around the system must be alternately wet and dry. If it remains wet, no purification takes place. That is why an automatic siphon is installed. If a continuous flow of liquid occurred from the septic tank, the system would never dry out. Therefore it is necessary to install some device such as a siphon.

Costs

No definite figures can be given as to the cost of this system. Local conditions and labor at hand will largely determine final cost. However, before the war, a septic tank large enough for five persons could be constructed for $75. The tank should be constructed of reenforced concrete thruout, according to the required dimensions for a given family. A mixture composed of one part cement, two parts sand and four parts gravel is sufficiently strong. Cinders instead of gravel or soil are frequently used around the absorbing system.

Neighborly Talks No. 8

THE NEIGHBOR WITH A GROUCH

He is the neighbor who can hardly be called companionable. He would not be your choice for a companion on a camping or fishing trip, but, detached from his grouch, he would be a good neighbor and make a force for righteousness. But they seem to have grown together—regular Siamese twins connection. He might be exhibited under the caption, "Great curiosity; a man and his grouch grown together." Possibly if this proved highly profitable, the grouch would disappear and he would be forced to return to the work-a-day world in order to accumulate another of equal magnitude and value as a drawing card. It is hardly charitable, however, to joke about so real and distressing an infirmity as a grouch.

The man with a grouch has never learned to forget. Some time—some day in the shadowy past—some fellow mortal or mortals did him a wrong. He has nursed and watered and cultivated that unpleasant memory; he has even awakened at midnight when the stars were twinkling in the infinite meadows of heaven, and thought of that grouch instead of the beauty and peace of the night and the goodness of God.

The neighbor with a grouch invariably has indigestion—a grouch and indigestion are first cousins, they are related both by nature and ill nature.

This neighbor can never get far enough away from himself to see himself as others see him; if he could, he would get a divorce from that grouch between the rising and setting of the sun, for there is nothing in the laws of God or of men forbidding such a divorce.

Let us do our best to turn his thoughts to other subjects—he needs a change of thought. If he can but see the beauty of the present he may forget the things of the past that are unwholesome and unhealthful to dwell upon. If he could only think healthful thoughts for a time—the many kindnesses that are shown him, the good qualities of his neighbors, the beauty of the flowers, the sweet songs of the birds, and the greatness of the Father Heart that has given him all things to enjoy, he might sever the chain of habit that has bound him to that awful grouch, and we would say: "Health and long life to this new neighbor of ours."

FEDERAL AND STATE ACREAGE REPORT

Secretary of Agriculture, Fred Rasmussen has completed arrangements with the Bureau of Crop Estimates, U. S. Department of Agriculture, for a joint acreage survey of the principal crops produced in Pennsylvania. This is the first step toward cooperation with all existing governmental and state agencies in promotion of agriculture of the state. Blanks will be prepared and furnished by the Department of Agriculture. These blanks will be easy to execute.—L. H. Wible.

THIS thirty-two page illustrated booklet is of vital interest to every farmer in the United States. It answers the questions you have been asking. It solves the problems you have been wrestling with. It gives you just the kind of information about tractors and tractor farming that you have been looking for. Sent free to any one. Mail the coupon today for your copy.

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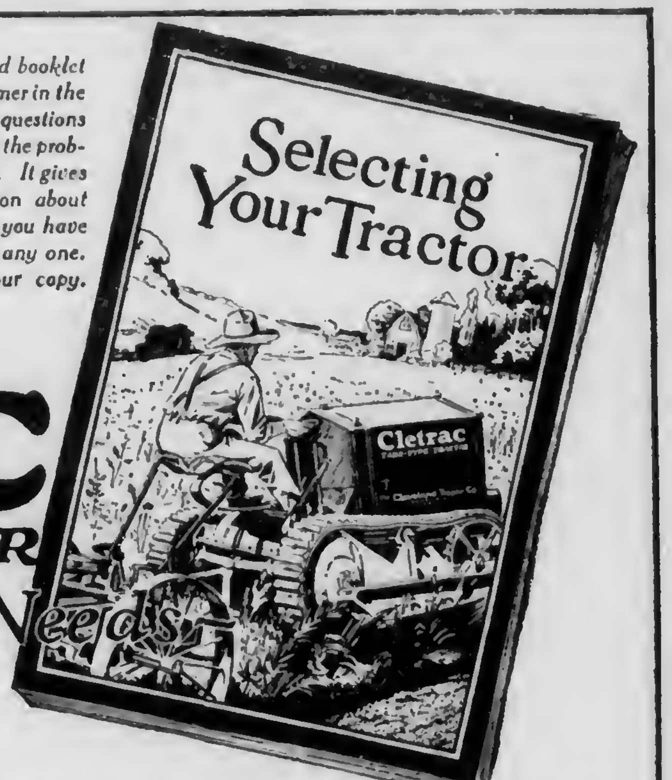

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POULTRY

HOW TO PRESERVE EGGS

Experiments in preserving eggs conducted by the United States Department of Agriculture in the past year obtained best results from a 10 percent solution of water glass—that is, one part of commercial water glass added to nine parts of boiled water. Good results were obtained with a slightly weaker solution, using 1 part of water glass to 14 parts of water. Better results were obtained when the water was boiled than when unboiled water was used.

Earthenware Jars Best Containers

In a test of different containers the earthenware jar gave by far the best and most satisfactory results. Softwood containers, such as candy pails, did not give satisfactory results, while hardwood containers, such as kegs used for cider and other beverages, gave much better results than the softwood pails, but did not begin to compare with the earthenware crocks. Even the hardwood kegs gave considerable trouble on account of leakage, and had to be watched constantly, which made them unsatisfactory. Galvanized metal containers similar to new garbage pails were also used with success, but were not quite so satisfactory as the crocks.

Tests with solutions other than water glass were made, and limewater, both with and without salt, gave satisfactory results. Where unslaked lime is more readily available than water glass the limewater method is an excellent one to use and is cheaper than the water glass. Tests in which the eggs were coated with wax and soap and other coating material did not give nearly so satisfactory results as when the eggs were kept in a solution.

Directions for the use of water glass and limewater are as follows:

Water-Glass Method

1. Select a 5-gallon crock and clean it thoroly, after which it should be scalded and allowed to dry.
2. Heat a quantity of water to the boiling point, and allow it to cool.
3. When cool measure out 9 quarts of water, place it in the crock, and add 1 quart of sodium silicate, stirring the mixture thoroly. This will be sufficient to preserve 15 dozen eggs, and will serve as a guide for the quantity needed to preserve large number of eggs.
4. The eggs should be placed in the solution. If sufficient eggs are not obtainable when the solution is first made, more eggs may be added from time to time. Be very careful to allow at least 2 inches of the solution to cover the eggs at all times.
5. Place the crock containing the preserved eggs in a cool, dry place, well covered to prevent evaporation. Waxed paper covering the top of the crock and tied around it will answer this purpose.

Limewater Method

Pour a small quantity of water on 1½ pounds of unslaked lime and when this is thoroly slaked add 5 gallons of boiled water. Allow the mixture to stand until the lime settles. Then pour off the clear liquid, add one pound of salt and use this for preserving the eggs, throwing away the sediment in the bottom of the receptacle. Use the same directions as recommended for the water glass for putting the eggs in this solution.

Fresh, clean eggs, properly preserved, can be used satisfactorily for all purposes in cooking and for the table. When eggs preserved in water glass are to be boiled, a small hole should be made in the shell with a pin at the large end before placing them in the water. This is done to allow the air in the egg to escape when heated and to prevent cracking.

Eggs will keep from 8 to 12 months in good condition, but are better up to the sixth or seventh month. Dirty or cracked eggs should not be put into the solution. Water glass costs about $1.20 a gallon, making the cost of preserving eggs with this material about 2 cents a dozen for the water glass. Water-glass solution should not be used again the second year unless it has kept quite clear and no odor or thick sediment has developed. The use of lime water is much cheaper than the water-glass method.

Hens Delight in Hunting Over Plowed Ground

ACREAGE FOR POULTRY FARMING

A poultryman is frequently asked the number of acres necessary to make a living from raising poultry. The question cannot be definitely answered because it is usually the man and the equipment more than the acreage that determines success or failure. Some poultrymen do a lot of good work and earn a living on five or ten acres but in general we believe that the farm should consist of at least twenty acres of good soil for the sake of safety.

On a twenty acre poultry farm there will be a lot of work and many will say it is impossible to look after such a proposition without much expensive labor but here is the point. Twenty acres gives the poultryman a chance to keep one or two cows and have a small pasture for them. He can have a field of clover and harvest a hay crop for the cows and hens. He can raise fruit on the poultry range and have an additional source of income. By managing the farm in this way it is not necessary to keep so many hens on a limited area and all of the year's work is not staked on the profits of the poultry crop.

The farmer with at least twenty acres can raise enough feed for the horse and is sure of a fine crop of vegetables and potatoes for the home table. Potatoes can be grown quite extensively and the poultry can range in the potato field without doing anything but benefit the crop. On such a farm there is an abundance of work at all times of the year but we believe there is less worry and more pleasure in such a life than in keeping large flocks of poultry on a few acres and buying all the feed.

Many poultrymen succeed in specializing entirely in poultry without giving any of their attention to other farm work but on the other hand there are poultrymen who try to do that and leave the business after a few years of discouragement. Oats and wheat can usually be purchased cheaper than they can be raised on a twenty acre farm but corn, mangels, clover and alfalfa can be raised for the hens quite cheaply and in addition the young growing stock can range on the same land where the crops are being produced.

There are the two extremes of poultry farming: The very little place, and the large farm of sixty, eighty or more acres. These large farms mean that the owner is not able to give the proper attention to the work and much help must be employed. Some of the hired labor may be inexperienced and this is apt to cause a loss in the poultry business. Poultry farming is a profession that requires much skill and years of experience before large propositions can be handled successfully.. It is best to start on a small scale and build gradually, reinvesting the profits of the business in improvements rather than borrowing large amounts of money for expansion. However, the writer believes that the beginner with poultry stands the best chance of making a living with about twenty acres of land where other crops can be produced at the same time to help out with the family expenses and the feeding of the poultry flocks. Less than twenty acres requires the purchase of too much feed and more than twenty acres requires a large investment and considerable hired labor.—R. G. K.

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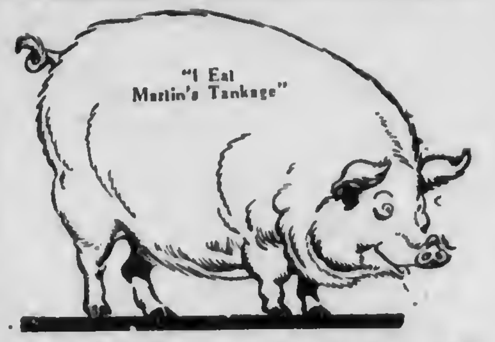

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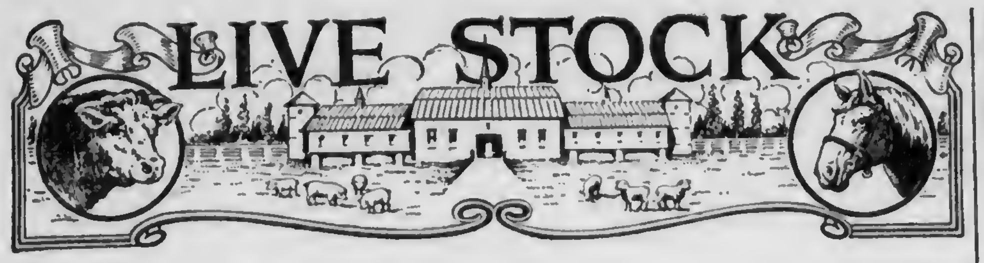

LIVE STOCK

ELECTRICITY FOR BALKY HORSES

I noticed an article in a recent issue of the Pennsylvania Farmer concerning the employment of electricity for correcting the balking habit in horses. That article would make it appear that this was now a new idea. I commenced experimenting with electricity for this same purpose in 1877, not only for balking but also for other evil habits, including runaways, kickers and cribbers. The following year, 1878, I applied for a patent, but as the patent office would not grant me a broad enough claim to cover all the different modes of its application, which was necessary to give me entire control of the system, I dropped the whole proceeding. My application for a patent, is still on file in the patent office.

The above may not be of any particular concern to any of our readers, but some of my experience during the period of my experimenting may be of some little interest. In the first place, I will say that I learned that the use of electricity alone is of no use except for a balky or lazy horse, where it will invariably enforce a super amount of animation. In cases of kickers or runaways, I found that it did more harm than good, unless applied in connection with the hobbling of the fore limbs controlled by means of the side line.

Handling Cribbers

In regard to cribbing, I learned that it was as easy to keep a horse from eating as to prevent him from cribbing. To prevent the animal from indulging in this habit of sucking air, various means have been employed, but the one most frequently resorted to is a narrow strip of leather buckled tightly around the neck, just back of the ears where muscles necessarily bulge out boldly during the act of cribbing. But this narrow strap is very objectionable. It ruffles the mane and irritates and sears the skin and often injures the windpipe. A broader strap and one long enough to encircle the neck and about 4½ to 5 inches in width, with a piece of zinc plate about one-third the length of the strap, attached thereto and then shaped so that this zinc portion would be fitted to the under side of the neck, will overcome these objections.

Experience With Balker

My arrangement in operating upon balkers was generally to hook them to a break cart with one connecting wire attached to the bit, the other to the crupper and both wires extending back to the electric battery which was placed upon the seat of the cart. On some occasions, however, I would hook the horse to other wagons and to heavy loads. In one case I wanted to try an experiment that was out of the regular order. The animal was one of the worst and most worthless balkers and belonged to Peter Merrell who ran a stage line between New Brunswick and Bound Brook, N. J. He was never on time when he drove this horse and he was sometimes compelled to borrow another horse on the route to finish out the trip.

Prof. Francis C. Van Dyke, of Rutgers College, was an expert electrician. I made arrangements with him to give, as an experiment, a heavy charge of electricity to Nr. Merrell's horse. We hitched the balker with another horse to the stage at his home stable, which was not far from the point where we were prepared to operate upon him. To get him there with the least possible trouble, a man walked ahead and led the balker with a line attached to the bridle. That is a trick that usually succeeds as long as the man stays on the job. After unhitching the horse he was led to a window inside of which was an electric battery. I have forgotten the voltage. To this, one end of each of the two connecting wires was attached and the other ends fastened to the bit with one strand to each ring. When everything was in readiness and I gave the signal, Prof. Van Dyke made the contact on the battery. The horse was thrown to his side momentarily but soon got to his feet. He was rehitched to the wagon. When given the word to go he immediately started off and I never heard that he ever attempted to back again, and he was under my observation for a considerable time.—J. C. Higgins, Somerset Co., N. J.

NEW YORK COUNTIES POOL WOOL

The sales committees representing sheep breeders' associations of Broome, Cayuga, Seneca, Tioga and Tompkins counties, New York, recently met and received sealed bids from wool dealers and mills on 100,000 pounds of wool. The lot went to a Syracuse dealer as the highest bidder, price ranging from 50 to 65 cents per pound. The dealer deposits a certain percentage of the purchase money in local banks and arranges for delivery at convenient points in each county. Farmers are well satisfied with the results. All farmers are permitted to join in the benefits by becoming members of the county associations.—C. H.

WATERING FARM HORSES

Walter Moore, a well known writer, says:—

"It is a common thing for farmers to work their horses in the hayfield from morning to night, watering them only at noon. This is done even on days of excessive heat. The driver usually has two or more refreshing drinks in the middle of the morning, and again in the afternoon; but the horses, who are equally as thirsty, go without. This want of water is not only distressing, but it causes the horses to drink to excess at noon and again at night, which often results in colic, and always tends to produce a distended stomach, or what farmers call a 'hay belly.' Farmers who would treat their horses humanely should take water into the field for them in hot weather."

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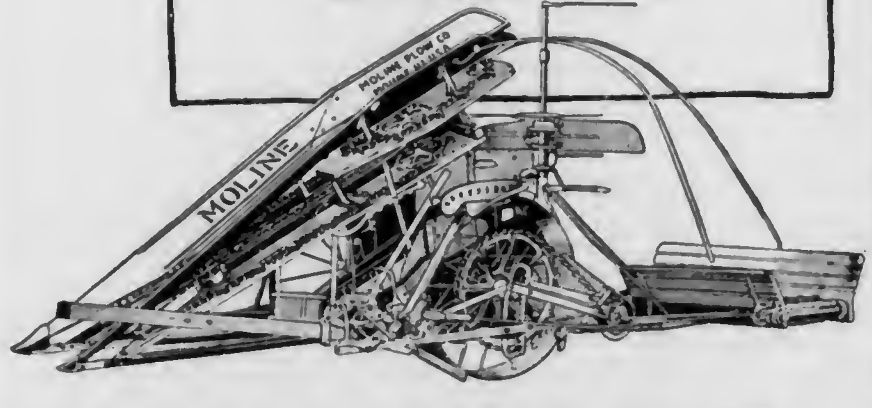

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His Native Heath

By JOSEPH C. LINCOLN

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I never could quite understand why the folks at Wellmouth made me selectman. I s'pose likely 'twas on account of Jonadab and me and Peter Brown making such a go of the Old Home House and turning Wellmouth Port from a sand fleas' paradise into a hospital where city folks could have their bank accounts amputated and not suffer more'n was necessary. Anyway, I was elected unanimous at town meeting, and Peter was mighty anxious for me to take the job.

"Barzilla,' says Peter, "I jedge that a selectman is a sort of dwarf alderman. Now, I've had friends who've been aldermen, and they say it's a sure thing, like shaking with your own dice. If you're straight, there's the honor and the advertisement; if you're crooked, there's the graft. Either way the house wins. Go in, and glory be with you."

So I finally agreed to serve, and the very first meeting I went to, the question of Asaph Blue worthy and the poorhouse comes up. Zoeth Tiddit—he was town clerk—he puts it this way:

"Gentlemen," he says. "we have here the usual application from Asaph Blueworthy for aid from the town. I don't know's there's much use for me to read it—it's tolerable familiar. 'Suffering from lumbago and rheumatiz'—um, yes. 'Out of work'—um, jest so. 'Respectfully begs that the board will—etcetery and so forth. Well, gentlemen, what's your pleasure?"

Darius Gott, he speaks first, and dry and drawling as ever. "Out of work, hey?' says Darius. "Mr. Chairman, I should like to ask if anybody here remembers the time when Ase was in work?"

Nobody did, and Cap'n Benijah Poundberry—he was chairman at that time—he fetches the table a welt with his starboard fist and comes out emphatic.

"Feller members," says he. "I don't know how the rest of you feel, but it's my opinion that this board has done too much for that lazy loafer already. Long's his sister, Thankful, lived, we couldn't say nothing, of course. If she wanted to slave and work so's her brother could live in idleness and sloth, why, that was her business. There ain't any law against a body's making a fool of herself, more'n the pity. But she's been dead a year, and he's done nothing since but live on those that will trust him, and ask help from the town. He ain't sick—except sick of work. Now, it's my idea that, lon's he's bound to be a pauper, he might's well be treated as a pauper. Let's send him to the poorhouse."

"But," says I, "he owns his place down there by the shore, don't he?"

All hands laughed—that is, all but Cap'n Benijah. "Own nothing," says the cap'n. "The whole rat trap, from the keel to maintruck, ain't worth more'n three hundred dollars, and I loaned Thankful four hundred on it years ago, and the mortgage fell due last September. Not a cent of principal, interest, nor rent have I got since. Whether he goes to the poorhouse or not, he goes out of that house of mine tomorrer. A man can smite me on one cheek and maybe I'll turn t'other, but when, after I have turned it, he finds faut' cause my face hurts his hand, then I rise up and quit; you hear me!"

Nobody could help hearing him, unless they was deefer than the feller that fell out of the balloon and couldn't hear himself strike, so all hands agreed that sending Asaph Blueworthy to the poorhouse would be a good thing. 'Twould be a lesson to Ase, and would give the poorhouse one more excuse for being on earth. Wellmouth's a fairly prosperous town, and the paupers had died, one after the other, and no new ones had come, until all there was left in the poorhouse was old Betsy Mullen, who was down with creeping palsy, and Deborah Badger, who'd been keeper ever since her husband died.

The poorhouse property was valuable, too, 'specially for a summer cottage, being out on the end of Robbin's Point, away from the town, and having a fine view right across the bay. Zoeth Tiddit was a committee of one with power from the town to sell the place, but he hadn't found a customer yet. And if he did sell it, what to do with Debby was more or less of a question. She'd kept poorhouse for years, and had no other home nor no relations to go to. Everybody liked her, too—that is, everybody but Cap'n Benijah. He was down on her 'cause she was a Spiritualist and believed in fortune tellers and such. The cap'n, bein' a deacon of the Come-Outer persuasion was naturally down on folks who wasn't broad-minded enough to see that his partic'lar crack in the roof was the only way to crawl thru to glory.

Well, we voted to send Asapah to the poorhouse, and then I was appointed a delegate to see him and tell him he'd got to go. I wasn't enthusiastic over the job, but everybody said I was exactly the feller for the place.

"To tell you the truth," drawls Darius, "you, being a stranger, are the only one that Ase couldn't talk over. He's got a tongue that's buttered on both sides and runs on ball bearings. If I should see him he'd work on my sympathies till I'd lend him the last two-cent piece in my baby's bank."

So, as there wa'n't no way out of it, I drove down to Asaph's that afternoon. He lived off on a side road by the shore, in a little, run-down shanty that was as no account as he was. When I moored my horse to the "heavenly-wood" tree by what was left of the fence, I would have bet my sou'wester that I caught a glimpse of Brother Blueworthy, peeking round the corner of the house. But when I turned that corner there was nobody in sight, altho the bu'sted wash bench, with a cranberry crate propping up its lame end, was shaking a little, as if some one had set on it recent.

I knocked on the door, but nobody answered. After knocking three or four times, I tried kicking, and the second kick raised, from somewheres inside, a groan that was as lonesome a sound as ever I heard. No human noise in my experience come within a mile of it for dead, downright misery—unless, maybe, it's Cap'n Jonadab trying to sing in meeting Sundays.

"Who's that?" wails Ase from 'tother side of the door. "Did anybody knock?"

"nock!" says I. "I all but kicked your everlasting derelict out of water. It's me, Wingate—one of the selectmen. Tumble up, there! I want to talk to you."

Blueworthy didn't exactly tumble, so's to speak, but the door opened, and he comes shuffling and groaning into sight. His face was twisted in and he had one hand spread-fingered on the small of his back.

"Dear, dear!" says he. "I'm dreadful sorry to have kept you waiting, Mr. Wingate. I've been wrastling with this turrible lumbago, and I'm 'fraid it's affecting my hearing. I'll tell you———"

"Yes—well, you needn't mind." I says; " 'cordin' to common tell, you was born with that same kind of lumbago, and it's been getting no better fast ever since. Jest drag your sufferings out onto this bench and come to anchor. I've got considerable to say, and I'm in a hurry."

Well, he grunted, and groaned, and scuffled along. When he'd got planted on the bench he didn't let up any—kept on with the misery.

"Look here," says I, losing patience, "when you get thru with the Job business I'll heave ahead and talk. Don't let me interrupt the lamentations on no account. Finished? All right. Now, you listen to me."

And then I told him just how matters stood. His house was to be seized on the mortgage, and he was to move to the poorhouse next day. You never see a man more surprised or worse cut up. Him to the poorhouse? Him—one of the oldest families on the Cape? You'd think he was the Grand Panjandrum. Well, the dignity didn't work, so he commenced on the lumbago; and that didn't work, neither. But do you think he give up the ship? No much; he commenced to explain why he hadn't been able to earn a living and the reasons why he'd ought to have another chance. Talk! Well, if I hadnot been warned he'd have landed me, all right. I never heard a better sermon nor one with more long words in it.

I actually pitied him. It seemed a shame that a feller who could argue like that should have to go to the poorhouse; he'd ought to run a summer hotel—when the boarders kicked 'cause there was yeller-eyed beans in the coffee he would be the one to explain that they was lucky to get beans like that without paying extra for 'em. Thinks I, "I'm an idiot, but I'll make him one more offer."

So I says: "See here, Mr. Blueworthy, I could use another man in the stable at the Old Home House. If you want the job you can have it. Only, you'll have to work, and work hard."

Well, sir, would you believe it?—his face fell like a cook-book cake. That kind of chance wa'n't what he was looking for. He shuffled and hitched around, and finally he says: "I'll—I'll consider your offer." he says.

That was too many for me. "Well, I'll be yardarmed!" says I, and went off and left him "considering." I don't know what his considerations amounted to. All I know is that next day they took him to the poorhouse.

And from now on this yarn has got to be more or less hearsay. I'll have to put this and that together, like the woman that made the mince meat. Some of the facts I got from a cousin of Deborah Badger's, some of them I wormed out of Asaph himself one time when he'd had a jug come down from the city and was feeling toler'ble philanthropic and conversationy. But I guess they're straight enough.

Seems that, while I was down notifying Blueworthy, Cap'n Poundberry had gone over to the poorhouse to tell the Widow Badger about her new boarder. The widow was glad to hear the news.

"He'll be somebody to talk to, at any rate," says she. "Poor old Betsy Mullen ain't exactly what you'd call company for a sociable body. But I'll mind what you say, Cap'n Benijah. It takes more than a slick tongue to come it over me. I'll make that lazy man work or know the reason why."

So when Asaph arrived—per truck wagon—at three o'clock the next afternoon, Mrs. Baldger was ready for him. She didn't wait to shake hands or say: "Glad to see you." No, sir! The minute he landed she sent him out by the barn with orders to chop a couple of cords of oak slabs that was piled there. He groaned and commenced to develop lumbago symptoms, but she cured 'em in a hurry by remarking that her doctor's book said vig'rous exercise was the best physic for that kind of disease, and so he must chop hard. She waited till she heard the ax "chunk" once or twice, and then she went into the house, figgeringk that she'd gained the first lap, anyhow.

But in an hour or so it come over her all of a sudden that 'twas awful quiet out by the wood pile. She hurried to the back door, and there was Ase, setting on the ground in the shade, his eyes shut and his back against the chopping block, and one poor lonesome slab in front of him with a couple of splinted knocked off it. That was his afternoon's work.

Maybe you think the widow wa'n't mad. She tip-toed out to the woodpile, grabbed her new boarded by the coat collar and shook him till his head played "Johnny Comes Marching Home," against the chopping block.

"You lazy thing, you!" says she, with her eyes snapping. "Wake up and tell me what you mean by sleeping when I told you to work."

"Sleep?" stutters Asaph, kind of reaching out with his mind for a life-preserver. "I—I wa'n't asleep.'

Well, I don't think he had really meant to sleep. I guess he just set down to think of a good brand new excuse for not working, and kind of drowsed off.

"You wa'n't hey?" says Deborah. "Then 'twas the best imitation ever I see. What was you doing, if 'tain't too personal a question?"

"I—I guess I must have fainted. I'm subject to such spells. You see, ma'am, I ain't been well for—"

"Yes, I know. I understand all about that. Now, you march your boots into that house, where I can keep an eye on you, and you help me get supper. To-morrer morning you will get up at five o'clock and chop wood till breakfast time. If I think you've chopped enough, maybe you'll get the breakfast. If I don't think so you'll keep on chopping. Now, March!"

Blueworthy, he marched, but 'twa'n't as joyful a parade as an Odd Fellers' picnic. He could see he'd made [illegible] a clean miss, and the white ball in the pocket. He knew, too, that a lot depended on his making a good impression the first thing, and instead of that he'd gone and "foozled his approach," as that city feller said last summer when he ran the catboat plump into the pier. Deborah she went out into the kitchen, but she ordered Ase to stay in the dining room and set the table; told him to get the dishes out of the closet.

All the time he was doing it he kept thinking about the mistake he'd made, and wondering if there wa'n't some way to square up and get solid with the widow. Asaph was a good deal of a philosopher, and his motto was—so he told me afterward, that time I spoke of when he'd been investigating the jug—his motto was: "Every hard shell has a soft spot somewheres, and after you find it, it's easy.' If he could only find out something that Deborah Badger was particular interested in, then he believed he could make a ten-strike. And, all at once, down in the corner of the closet, he see a big pile of papers and magazines. The one on top was the Banner of Light, and underneath that was the Mysterious Magazine.

Then he remembered, all of a sudden, the town talk about Debby's believing in mediums and spooks and fortune tellers and such. And he commenced to set up and take notice.

At the supper table he was as mum as a run-down clock; just set in his chair and looked at Mrs. Badger. She got nervous and fidgety after a spell, and fin'lly bu'sts out with: "What are you staring at me like that for?"

Ase kind of jumped and looked surprised. "Staring?" says he. "Was I staring?"

"I should think you was! Is my hair coming down, or what is it?"

He didn't answer for a minute, but he looked over her head and then away acrost the room, as if he was watching something that moved. "Your husband was a short, kind of fleshy man, as I remember, wa'n't he, absent-minded like.

"Course he was. But what in the world—"

" 'Twa'nt him, then. I thought not."

"Him?' My husband? What do you mean?"

And then Asaph begun to put on the fine touches. He leaned acrost the table and says he, in a sort of mysterious whisper: "Mrs. Badger," says he, "do you ever see things? Not common things, but strange—shadders like?"

"Mercy me!" says the widow. "No. Do you?"

"Sometimes seems's if I did. Jest now, as I set here looking at you, it seemed as if I saw a man come up and put his hand on your shoulder."

Well, you can imagine Debby. She jumped out of her chair and whirled around like a kitten in a fit. "Good land!" she hollers. Where? What? Who was it?"

"I don't know who 'twas. His face was covered up: but it kind of come to me—a communication, as might say—that some day that man was going to marry you."

"Land of love! Marry me? You're crazy! I'm scart to death."

Ase shook his head, more mysterious than ever. "I don't know," says he. "Maybe I am crazy. But I see that same man this afternoon, when I was in that trance, and—"

"Trance! Do you mean to tell me you was in a trance out there by the wood-pile? Are you a medium?"

(Continued Next Week.)

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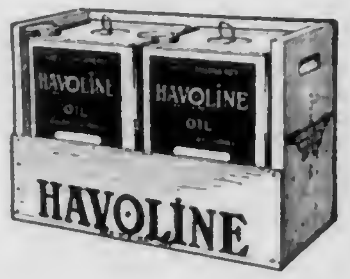

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Markets

PHILADELPHIA PRODUCE

Philadelphia, Pa., July 7, 1919.

Altho the prices on potatoes are quite a little lower than they were a week ago, this is to be expected at this season with the supplies of nearby New Jersey stock increasing every day. There were 09 fresh cars of potatoes offered at the depot this morning, and altho the market opened up weak, with the buyers showing a tendency to bear down prices, the trading became quite active later and these offerings were soon cleaned up and the trade still looking for good stock. Best Eastern Shore of Virginia potatoes were being sold at $5.25-5.50 per barrel, while poorer grades sold at $4.50-5 per barrel. Norfolk potatoes sold mostly at $4.75-5 per barrel with some not quite so good at $4.50, while the North Carolinas ranged from $4-5 per barrel, as to quality. The New Jersey stock is now showing up quite freely and in better condition than they did a week ago, when they were inclined to be a little green. Good New Jersey potatoes sold today at $1-1.35 per ⅝ bushel basket, with No. 2's at 60-70c, and culls at 30-35c.

Vegetables

The nearby asparagus season is holding on longer than we expected as there are quite plentiful offerings on the market every day. Some of it however is more or less out of condition which makes an extremely wide range in prices. Today some asparagus was being sold at 35-45c per bunch, and a little further on was some very poor asparagus only bringing 5-8c per bunch. The decline in prices on both green and wax beans as reported in these columns last week has been followed by liberal offerings and a steady decline in the market every day since. Today good green beans were being sold at from 30-50c per ⅝ basket and wax beans at 25-40c per basket. There has also been ample offerings of new bunch beets, but there has been a good demand which took the supplies quite freely at 3-4c per bunch, while the beets in bushel baskets with the tops cut off have been selling at $1.25-1.50 per hamper. New carrots are arriving a little less freely and the market today was firm at 2 3½c per bunch. Hamper carrots sold quickly at $1.25-1.50 per hamper.

Since last week there has been a decline in the price on cabbage, but the lower prices served to shut off supplies so that today there was a strong reaction and prices are now a little above last week's level. Pennsylvania barreled stock sold at $2-2.75 per barrel and New Jersey cabbage at 40-75c per ⅝ bushel basket. Corn made its appearance on the market during the past few days and is meeting a good demand at $1.75-2 per ⅝ bushel basket, but as supplies are expected to rapidly increase, lower prices are expected within a very short time. The best cucumbers on the market, outside of hot bed and hot house stock, are coming from Maryland and Delaware, these selling this morning at $2.25-2.50 per bushel hamper. Norfolk is sending some fair quality in barrels which sold this morning at $5-6 per barrel. The Norfolk hot bed cucumbers sold at $2.50 per hamper, while hot house cucumbers are meeting a good demand at 50-75c per dozen. Egg plant seems to be more scarce than usual at this season and sold today at $4.50 per box. The supplies of lettuce were somewhat more liberal today and prices are showing a tendency to ease off. New York state and New Jersey are furnishing the market's requirements for lettuce, and stock from both states is selling at about the same values, viz: 75c-$2 per box and 75c-$1.25 per hamper.

There has been an improvement in the onion market during the past week and bushel hamper onions are now selling at $2.25-2.50 per hamper, and the ⅝ baskets at $2.40-2.75 basket, these prices applying to the yellow onions. White onions are selling from $3.25-4 per bushel hamper, the higher price being obtained for the fancy boiling size. Parsley, after ruling extremely low for several days, shows signs of doing better as it is now selling at from 75c-$1.60 per hundred bunches, which is about 25 cents higher than a week ago. Peas are such a scarce commodity that we are omitting quotations for this week. Strictly fancy peas would bring extremely high prices. Peppers is another commodity that is again coming from New Jersey. They are meeting an active demand at from $1.25-1.75 per ⅝ bushel basket. Some southern peppers sold today at $2.50-3 per crate. Radishes are in fair supply and demand at 2-2½c per bunch. The season on rhubarb is fast drawing to a close and the quality of the supplies is not very fancy with prices ranging from 3-4c per bunch. Romaine is practically unchanged from last week at $1-1.25 per box for best, with poor at 50-75c per box. There has been another drop in the prices on white squash which are now selling mostly at 90c-$1 per ⅝ basket. Contrary to our opinion last week the prices on New Jersey tomatoes have advanced instead of declining. There were approximately 5,000 to 6,000 packages of New Jersey tomatoes on the market today, and best stock sold from $4-5 per ⅝ bushel basket or crate, while the culls sold all the way from $1.50-3.25 per basket. Many of the New Jersey tomatoes are showing the effect of the extremely warm weather, some being badly blistered, and strictly fancy tomatoes are very scarce. This partly accounts for the advance in price, as strictly fancy tomatoes are very scarce and wanted. Spinach is a very scarce commodity and fancy stock when here sells readily at $3 3.50 per barrel. Watercress continues in ample supply for the demands at 2-3c per bunch. Rutabaga turnips are meeting a slow demand at 65-85c per ⅝ bushel basket.

Fresh Fruits

Altho the supply of the new crop of apples is gradually getting more plentiful, prices on the strictly fancy apples are holding firm at full former prices. Many of the offerings of apples however, are very poor and irregular, and this class of fruit is of uncertain value making an extremely wide range in quotations. Some strictly fancy hand-picked apples are selling at $3-3.50 per bushel hamper, while at the same time some very poor fruit is being sold at 75c-$1 per hamper. There have been no strawberries on the market in several days. Blackberries are less plentiful and a trifle higher at 20-23c per quart. There has been a big drop in the price on currants, as the same grade of currants that sold last week at 18-20c per quart sold today very slowly at 14-16c per quart, altho a few sales of extra fancy did exceed these prices in small lots. Red raspberries are higher under lighter supplies, selling today at 15-17c per pint, these prices being about 3 cents per pint higher than a week ago. Gooseberries which started to decline last week are still lower this week, as they are only bringing 8-12c per quart at this writing with very few selling above 10c per quart. The season on sour cherries is nearly over, the only supplies today being from storage which sold at 25-30c per quart. Huckleberries are doing a little better when fancy, selling at 20-25c per quart mostly. There has been a sharp advance in the price on cantaloupes, which are selling at about $1.50 per crate higher than a week ago. Today the same grade of cantaloupes which sold last week at $2.50-3 per crate, sold up to $4-4.50 per crate, while the pony crates which sold last week at $2.25-2.75 sold today at $3.50-4 per crate. The bottom fell out of the peach market during the past week and on one day $2.25 per crate was the top of the market. Today, however, under moderate supplies and an improved demand, the market did a little better, best peaches selling at $2.25-2.75 per crate, and the prospects point to higher prices before the end of the week. There were 28 cars of southern wtaermelons offered today and prices ranged from $400-600 per car on good melons, while small sizes and wasty melons sold from $250-300 per car.

Poultry

The market on live fowls appears to be in a rather unsettled condition, as prices seem to be fluctuating up and down from day to day. Prices at this writing are about one cent per pound lower than they were a week ago, as they are now selling at 36-37c per pound. Spring chickens are also a little lower than a week ago, but they are still bringing the fine price of 40-50c per pound for chickens not Leghorns, while the Leghorns draw from 38-42c, as to size and quality. Old roosters are ruling about steady at 23-25c per pound.

Eggs

The sharp advance of 3 cents per dozen as reported in these columns has been fully maintained over since and the market has ruled firm at unchanged prices. The outlook is for a continued firm market on strictly fancy eggs. Many of the supplies, however, are showing more or less the defects incident to hot weather and this class of stock is dull and irregular in value, especially the eggs that come from southern points. At this writing sales of eggs are being made on about the following basis: Nearby current receipts, 46c; nearby firsts, 50c; nearby seconds, 42½-44c; Western firsts, 48c; Western extra firsts, 50c; Southern eggs, 41½-44c, as to quality.

LANCASTER PRODUCE MARKET

Lancaster, Pa., July 7, 1919.

An avalanche of produce which appeared on the market early today was completely moved at top prices before eight o'clock, a quick drive being made against raspberry stalls. Eggs also sold rapidly. Only slight changes were reported in any of the commodities.

Butter and Eggs.—Creamery butter, 70c lb.; country butter, 55c lb.; eggs, 46-48c dozen; duck eggs, 50c dozen; goose eggs, 10 cents each.

Poultry.—Dressed old chickens, $1.75-2.50 each; dressed young chickens, $1.75-2 each; old live chickens, 28c pound.

Vegetables.—Parsnips, 5c box; spinach, 20c per ½ pk.; turnips, 15c per ½ pk.; potatoes, 25-30c per ½ pk.; do., $2-2.25 bu.; new potatoes, 30-35c per ½ pk.; sweet potatoes, 50c per ½ pk.; cabbage, 5-10c head; lettuce, 10-15c head; cauliflower, 10-15c head; oyster plant, 15c bunch; lima beans, 10-15c pint; tomatoes, 15c box; peas, 20c per ½ pk.; beets, 5c bunch; beans, 20c peck; rhubarb, 5c bunch; corn, 60c dozen; raspberries, 25c box; huckleberries, 20-25c box; watermelons, $1 each; cantaloupes, 12-15c each.

Grain Market.—Wheat, $2.20 bu.; rye, $1.50 bu.; oats, 80c bu.; ear corn, $1.75 bu.; timothy hay, $37 ton; mixed hay, $35 ton; wheat straw, $15 ton; oat straw, $12 ton.

YORK PRODUCE MARKETS

York, Pa., July 7, 1919.

There is a falling off in the supply of produce owing to the continued dry weather. The cherry crop is over, and, as predicted, it lasted but a short time and was less than a half crop. The raspberries were small in size and not up to the standard in quality and quantity. York is facing a peculiar situation in its produce market, that is causing considerable feeling. For years there has been antagonism between the farmers and the owners of the market houses and authorities of the city. The tendency is to make such rules, and regulations as to cause the farmers to sell all their produce and supplies at the market direct to the consumers at whatever price the public is willing to pay. If there is more than the city can consume, the price naturally drops to an abnormal level as no dealer is supposed to buy and send away. As an instance, on June 27th, eggs were offered as low as 40 cents but could not be sold, while in other nearby cities they were bringing 48 to 50 cents per dozen. As a result of this forcing of the prices downward, practically all the strawberries, sour cherries, raspberries, and much cabbage and other produce is being hauled away. This is resulting in much higher prices for what is taken to York, and judging from what one hears it is likely that wholesale marketing by truck away from the city is finding much favor and will continue to increase, at least until the owners of the market houses take off some of their unjust restrictions.

Eggs.—42-45c per dozen.

Butter.—Country, 55c lb.; separator, 60-65c lb. Milk, 10c quart.

Poultry.—Hens, 28-30c lb.; springers, 40c lb.; dressed, $1.25-2.50 each.

Potatoes.—New, 20-25c ¼ pk.; cabbage, 5-15c head; lettuce, 3-5c head; beets, 3-6c bunch; radishes, 3-5c bunch; onions, 5c bunch; lima beans, 15-20c pint; soup beans, 10-12c pint; celery, 5-10c stalk; rhubarb, 3-4c bunch; asparagus, 8-12c bunch; lard, 32c pound.

Fruit.—Apples, new 10-30c ½ pk.; cherries, 15-20c box; raspberries, 20-25c box; reds, 30c box; currants, 18-20c box.

Retail Grain Market.—Wheat, $2.70; corn, $1.90; oats, $1.01; rye, $1.65; bran, $2.85 cwt.; middlings, $3.10 cwt.

Wholesale Grain Market.—Wheat, $2.30; corn, $1.72; rye, $1.45; oats, 80c; bran, $54 per ton; middlings, $67 per ton.

BALTIMORE PRODUCE

Baltimore, Md., July 7, 1919.

Produce.—Potatoes, new, No. 1, $4.50-5 bbl.; do., No. 2, $3-3.50 bbl. Cabbage, new, $1.50-2 crate; do., $1.50-2 bbl. Lettuce, 50c-$1 basket. Onions, nearby, $2-2.25 basket. Spring onions, $1-1.25 per 100 bunches. Rhubarb, 3-4c bunch. Cucumbers, $6-7 bbl. Spinach, 75c-$1 basket. Carrots, 3-4½c bunch. Green beans, 50-60c hamper, do., wax, 50-60c hamper. Beets, 2½-4c bunch. Peas, $1.75-2 bushel. Green corn, $1.25-2.25 crate. Tomatoes, $1.50-3 carrier.

Fruits.—Apples, early harvest, $2.50-4.50 bbl.; $1-2 bkt. Red cherries, 10-12c box; do., white, 20-22c. Gooseberries, 12-14c lb. Blackberries, 15-18c quart. Red raspberries, 32-35c quart; do., black, 27-28c. Currants, 15-20c quart. Huckleberries, 20-21c quart.

Butter.—Creamery, western fancy, 53-54c; choice, 52-53c; pound prints, 54-56c. Nearby rolls, 45-46c. Dairy prints, 46-47c.

Eggs.—State, Pennsylvania and nearby, 43-44c; Eastern Shore and Virginia, 43-44c. Southern, 42-43c.

Live Poultry.—Springers, 40-45c lb.; old roosters, 19-20c; old hens, 35-37c lb.; ducks, 24-27c; do., spring, 35-40c; pigeons, 35-40c pair; guinea fowls, 50-70c each.

Grains.—Wheat, new, bag lots, $2.30-2.38¾ bu., as to quality. Corn, bag lots, No. 3, $1.95 bu. Oats, standard white, 78c; No. 3 white, 77½c. Rye, nearby, $1.45-1.56.

Hay.—No. 1 timothy, $36-37 ton; do., standard, $36-36.50 ton. Light clover, mixed, $32-34 ton. Clover, mixed, $29-33. Clover, clear, $27-29 ton. Tangled rye straw, $11.50-13.50. Wheat straw, $7.50-8.50 ton. Oat straw, $11-12 ton.

Mill Feeds.—Winter wheat bran, $53 ton; brown middlings, $53 ton; white middlings, $63 ton.

NEW YORK PRODUCE

New York City, July 7, 1919.

Butter.—Steady; receipts, 17,366 tubs; creamery higher than extras, 50-50½c; creamery extras (92 score), 49½c; firsts, 48-49c; packing stock, current make, No. 2, 44c.

Eggs.—Irregular; receipts, 38,712 cases; fresh gathered, extras, 51-53c; fresh gathered, extra firsts, 47-50c; firsts, 43-46c; state, Pennsylvania and nearby western hennery whites, fine to fancy, 56-58c; state, Pennsylvania and nearby hennery whites, ordinary to prime, 47-55c; state, Pennsylvania and nearby hennery browns, 54-55c; do., gathered browns and mixed colors, 50-53c.

Cheese.—Irregular; receipts, 9,103; state, whole milk flats, current make specials, 32-33¾c; do., average run, 31-31¾c; state, whole milk, twins, current make, specials, 31¾-32½c; do., average run, 30¾-31½c.

Poultry.—Live firm; broilers, 42-45c; fowls, 35c; old roosters, 22-23c; turkeys, 25-30c. Dressed steady, broilers, 38-55c; chickens, 40-43c; fowls, 27-35½c; old roosters, 19-22c; turkeys, 46-49c.

Vegetables.—Potatoes, new, No. 1, $3-4.75 bbl.; No. 2, $1.50-2.75 bbl. Asparagus, green, $1-3.50 doz. bunches; do., white, $1-3.50 doz. bunches. Beets new, $2-4.50 per 100 bunches. Carrots, new, $2-5 per 100 bunches. Scullions, $1-2. Cabbage, 50c-$3 crate. Lettuce, 25c-$1 basket. Tomatoes, Jersey, No. 1, $4-4.50 box; culls, $2.50-3.

Fruit.—Apples $2.50-3.50 basket. Strawberries, 20-30c quart; raspberries, 10-17c pint; peaches, $1-2.50 crate. Jersey, 50-75c basket. Cherries, red sweet, 8-lb. bas., $1-1.25; red sour, do., 75-90c. Gooseberries, 8-18c quart.

PHILADELPHIA LIVE STOCK

Philadelphia, Pa., July 7, 1919.

Receipts of live stock for three days ending July 5 were as follows:

	Beef Cattle	Sheep and Lambs	Hogs
Total for Week	1,924	3,387	4,964
Previous Week	2,239	6,330	5,328

Calves.—Receipts of calves last week were 2,121 head against 1,881 head week previous.

Beef Cattle.—There was little activity in this market and no important change in prices.

Steers, fair to good, $14-15; common to fair, $12.50-14; bulls, good to choice, $12.50-14; fair to good, $10-11.50; common to fair, $8-10; cows, fat, per lb., good to choice, corn fed, 10-11c; do., fair to good, 8-10c; do., common to fair, 6½-8c; bologna cattle, per lb., good, fleshy, 5½-6½c; common to good, 4-5½c; calves, extra choice, $20.50-24; fair to good, $19-20; common, $15-18; heavy, $8-11; Tennessee, choice, $16-18.50; other southern, $10-14.

Sheep and Lambs.—The market was quiet, but steady with moderate supplies. Quotations:

Sheep, sheared, wethers, extra, $10-10.50; good to choice, $8.75-9.50; medium, $7-8; common, $3.50-5; ewes, fat, heavy, $7.50-8.50; spring lambs, choice, $18.50-19; medium, $15.50-17; do., culls and common, $12-14.

Hogs.—Ruled firm and higher. Quotations for best westerns, $24.

City Dressed Stock.—Trade was quiet and prices were without important change. Quotations:

Steers, 18-23c; heifers, 17-21c; cows, 15-17c; calves, city dressed, choice, 27-30c; country dressed, 23-25c; sheep, 16-22c; lambs, spring, 30-34c; hogs, 29½c.

PHILADELPHIA HAY AND GRAIN

Philadelphia, Pa., July 7, 1919.

Baled Hay and Straw.—Receipts, 168 tons hay; trade quiet; straw weak. We quote as follows:

Timothy, No. 1, $40-41; exceptional lots higher; No. 2, $38-39; No. 3, $35-36; clover-mixed hay, light and mixed, $38-39; No. 1 do., $35.50-36; No. 2 do., $33-35; No. 1 straight rye, $13-13.50; No. 2 do., $12-12.50; No. 1 tangled rye, $12.50-13; No. 2 do., $11.50-12; No. 1 wheat straw, $12-12.50; No. 2, $11-11.50; No. 1 oat straw, $12-12.50; No. 2 do., $11-11.50.

Bran.—Steady. Car lots, including sacks, soft winter bran in 100-lb. sacks, per ton, $43-44; spring bran in 100-lb. sacks, per ton, $42-43.

Wheat.—No. 1 Red Winter, $2.39; No. 2, $2.36.

Corn.—Yellow, as to grade, $1.95-1.98.

Oats.—No. 2, white, 80½-81c; standard 81-81½c.

NEW YORK HAY AND GRAIN

New York City, July 7, 1919.

Feed.—The market for mill feed was again higher as far as Western offers were concerned, and mills apparently have little feed for sale and are asking more money for the moderate quantities they have to offer. Buyers are not following the advance, however, and in consequence the volume of business was of small proportions.

Quotations: City feed, bran, $40; middlings, $48, in 100-pound sacks; red dog, $62, in 100-pound sacks; Western spring bran, $42.50-43; standard middlings, $50-51; flour middlings, $58-59; red dog, $64.50-65, all in 100-pound sacks, 30-day shipment. Oat feed, $32.50; rye middlings, $45; white hominy feed, nominal, all in 100-pound sacks. Cottonseed oil meal, nominal; linseed oil meal, nominal, in 100-pound sacks.

Hay and Straw.—Offerings continue very heavy at all harbor points, trade slow and market weak and demoralized, and all reasonable bids being accepted on the medium and low grades, especially small bales. Rye and oat straw dull and weak.

Hay.—No. 1 large bales, $42 ton; No. 2, $38-40 ton; No. 3, $32-35; Shipping, $28-29 ton. Fancy light clover mixed, $37-39 ton. Clover, No. 1, mixed, $34-36.

Straw.—Per ton, No. 2 rye, $12-13.

Wheat.—No. 2 red, $2.37½. No. 3 hard winter, $2.37½.

Corn.—No. 2 yellow, $2.05. No. 3 yellow, $2.04.

Oats.—Standard, 81½c.

Rye.—Export, $1.59½.

PHILADELPHIA DAIRY MARKET

Philadelphia, Pa., July 7, 1919.

Butter.—Receipts, 4,592 tubs. The market showed no important change, but lacked strength and some holders cleaned up surplus stocks at concessions from quotations. Trade was quiet. The quotations are as follows:

Fresh, solid-packed creamery, extra, 51c; higher-scoring goods, 52-54c, the latter for jobbing sales; extra firsts, 50c; firsts, 48-49c; seconds, 46-47c; thirds, 43-45c; sweet creamery, choice and fancy, 53-55c; do., fair to good, 48-52c; ladle packed, as to quality, 45-48c; packing stock, 43-44c; special fancy brands of nearby prints jobbing at 58-60c; good to choice, 53-57c; fair, 48-51c.

Cheese was in fair demand and firm under light offerings. We quote: New York and Wisconsin flats, current make, choice, 32½-33c; specials higher; fair to good, 31½-32c; jobbing sales of fancy goods, 33½-34½c.

NEW YORK MILK MARKET

New York City, July 7, 1919.

Business was slow at the opening of the week, but demand increased later and closed active. Surplus gradually diminishing but still enough to keep nearly all of the large distributers manufacturing. Retail prices have advanced in the city to 18c per quart for grade A and 16c for grade B. Loose milk sells from 11-13c. The July rate for 3 percent milk in 200 mile zone is $3.01 per 100 lbs.; add 4c per 100 lbs. for each one-tenth of one percent extra butterfat.

Receipts of milk and cream in 40-quart cans for the week ending July 5, 1919, were as follows:

Railroads	Milk	Cream
Erie	36,886	5,474
Susquehanna	7,366	103
West Shore	16,767	2,523
Lackawanna	63,277	3,344
N. Y. Central (long haul)	152,420	4,143
Ontario	47,172	1,883
Lehigh Valley	57,806	2,380
New Haven	6,878	66
Pennsylvania	12,220	414
Other Sources	6,400	200
Totals	407,192	20,530
Same week last year	397,403	20,426

TOBACCO MARKET

It is becoming more evident every day that tobacco growers who refused the many low offers of past months, thus contributing to the defeat of an evident effort to get the product at an unfair price, have not done so in vain. Instances were reported in which almost double former offers have been realized and of course the end is not yet for those who still hold their product. Common filler tobacco is now selling at about $6 per cwt. and wrappers in proportion, the latter being even more than 100 percent higher than during the winter and spring. Local as well as general buyers were uniformly busy, no grower being too remote to be found and importuned to sell. The tobacco which has been pooled in the several growers' organizations was not offered so far as known it seeming to be the policy of those who have waited so long to wait a while longer, and thus receive the full force of the advance which it is evident is now coming. Apparently these advances have slightly stimulated the acreage of the present year, as indicated by a late continuation of the planting season in all localities. On that account there has developed an unusual demand for plants, those growing the same for commercial purpose being unable to supply the demand. However, this demand has come in part from the loss by insects, prominently wire worms, which have been quite bothersome in many places. Incidentally, would not the growing of plants to be sold to growers be a profitable business in all tobacco growing sections. There are always those who fail in their own efforts and with such a source many would depend on it entirely, thus dispensing with their own efforts and frequent losses.

OUR MAKE-OVER DEPARTMENT

Making a Coat Into a Cape

In the Pennsylvania Farmer recently I saw a cape made from a coat, which I liked very much. I have a good mustard color spring coat which has plenty of material, and would like to know if you can give me any suggestions for making this into a cape. It has a long waist line, and the lower part is gathered onto the back and finished with a pretty stitching. It has a green collar, long sleeves and a full length coat.—L. R., Binghamton, N. Y.

This is how I would do it: I would use the back fullness just as it is, with the pretty stitching topping it. A fitted yoke could be shaped from some not-needed portion of the material; the stitched top could be sewed to this, the fullness below making the back of cape portion. I should use the collar and top of coat fronts just as they are, attaching the cape fronts to these, in front of and below the shoulders. The cape fronts may have to be pieced, but could be cut very short with good effect, having length only at the back of the gathered cape. Machine stitching, braiding, buttons, straps, just any kind of trimming almost, will cover the piecing wherever it may be, and give to your cape that did-it-on-purpose appearance so much desired in a made-over garment.

My own coat, brought into cape fashion as described in February 22 Pennsylvania Farmer, had pocket slits across each side of the cape just below the shoulders, but these were disguised with button - trimmed straps that look quite decorative.

If your coat has big patch pockets, which I surmise from the style you describe, you might add them to the stitched band, stitching them to match it, and thus carry your stitched trimming effect quite out to the fronts, where it should be fastened to the old coat top. Small patch-pockets would be good on the coat fronts. A belt extending across the front and around the back would hold the front portions well in place. My own coat-cape has a half belt only, across the back, and a narrower strap also across the back, a little lower, about at the hip line. So strapped, the garment can not slip in front. My coat-cape is further held down by lead weights across the lower edge in front.

Snaps placed where they could drape the cape fronts dolman-fashion would give a pleasing change, making your cape a two-style garment. A bright-colored printed satin lining would enhance its attractiveness. A shirred pocket of the lining satin placed on the inner left side of the cape, just where it will be handy for holding handkerchief or coin purse, is a clever feature on one of the new capes which I examined recently. The garment was made of khaki, lined with bright blue satin figured with a Chinese design in rose and black. The girl who wears this cape has attached a cute little blue suede coin purse to the shirred pocket by its silver chain. The effect is clever, as is also a tassel at the tip of a pointed trimming across the back of the cape below the yoke.

No matter how much your cape has to be pieced, braiding, machine stitching, stitched bands or buttons will cover the piecing, and add decoration.

Save your old coat sleeve tops for spats, and wear them with your cape next fall or on cool days this summer.—The Make-Over Lady.

POISON BAIT FOR ANTS

"How can I get rid of those pesky ants?" is the wail going up from more than one housewife these days. "I have tried everything, it seems to me," says one, "but nothing seems to work."

Those who have had this experience might try the following bait, says the New York College of Agriculture: 1 pound of sugar, ⅓ of an ounce of arsenate of soda, and 1 quart of water. After the sugar has been dissolved in the water, add the arsenate of soda, boil the mixture, strain it, and allow it to cool. Small sponges should then be dipped in this liquid and placed where the ants are found. Great care must be exercised in handling this syrup, as it is poisonous.

Among June Roses

Excellent results are reported from use of powdered sodium fluoride. This powder is applied by means of a small puffer, or dusted, from a bottle or box, into the cracks or crevices where the ants have their runways.

CONVENIENT WINDOW WASHER

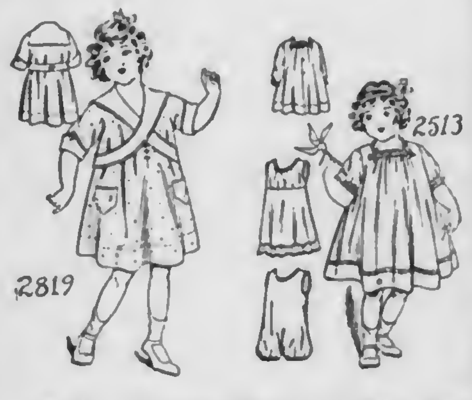
I have found that a lot of tools can be used on the farm and in the farm workshop that were not originally intended for the farm. This is also true in the farm home. I remember when my mother first discovered the usefulness of the window-washing outfits used by the store keepers in our town. There is no place where windows are harder to reach than in the country houses and where the time needed to wash them is harder to find. The ground under a window is not a very solid footing for a ladder. If I remember right, the brush and rubber wiper for this window washing cost 75 cents. This included a pole that is interchangeable with either the brush or the rubber wiper. The rubber strip set in a metal holder used to scrape the water off the windows in this case was an inch too wide for some of the smaller sash. This was easily cut down with a hack saw to the width wanted.—Earl Rogers.

Be sure all the labels on the canned fruit are securely pasted. Sometimes the glue fails to stick and a second application will be necessary.

PENNSYLVANIA FARMER PATTERNS

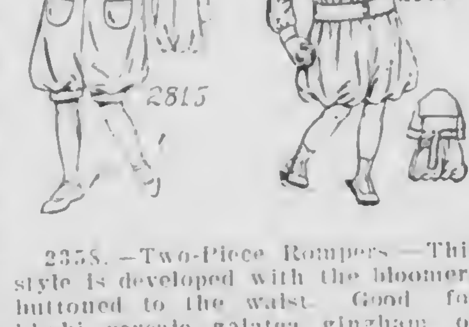
Give figures and letters of each pattern exactly as printed at beginning of each description or we will not be responsible for correct filling of orders. Give bust measure when ordering waist patterns, waist measure for skirt, and age for children's patterns. Address Pennsylvania Farmer, 261 S. Third Street, Philadelphia, Pa.

2819.—Neat Little Model.—It may be finished without the collar trimming. Suitable for all wash fabrics. The closing is at the center front under the crossing of the collar portions. The pattern is cut in 3 sizes: 2, 4 and 6 years. Size 4 requires 2¾ yards of 36-inch material. Pattern costs 10 cents.



2513.—Child's Short Clothes Set.—This outfit comprises a simple dress, a short-waisted petticoat, and a combination waist and drawers, which could also serve for bloomers. Lawn, batiste, gingham, chambray, voile or percale are suitable for the dress. For the undergarments muslin, cambric, long cloth and nainsook. If the combination undergarment is used as rompers it should be of galatea, gingham, drill, linen, repp or percale. The pattern is cut in 5 sizes: 1, 2, 3, 4 and 5 years. Size 4 requires, for the dress, 2⅜ yards; for the petticoat, 1⅝ yard; for the combination, 1½ yard, of 36-inch material. Pattern costs 10 cents.

2815.—Play Suit.—This style comprises a kimono waist, with wrist or short sleeve finish, and sleeveless rompers, which close on the shoulders. Gingham, percale, khaki, drill, seersucker or galatea may be used. The pattern is cut in 5 sizes: 2, 3, 4, 5, and 6 years. Size 4 requires 1⅝ yards for the waist, and 2¼ yards for the rompers, of 27-inch material. Pattern costs 10 cents.



2358.—Two-Piece Rompers.—This style is developed with the bloomers buttoned to the waist. Good for khaki, percale, galatea, gingham or chambray. The sleeve may be in wrist length, finished with a band cuff, or as in the back view, in elbow length. The pattern is cut in 4 sizes: 2, 4, 6, and 8 years. Size 6 requires 3⅛ yards of 36-inch material. Pattern costs 10 cents.

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ON 30 DAYS' TRIAL
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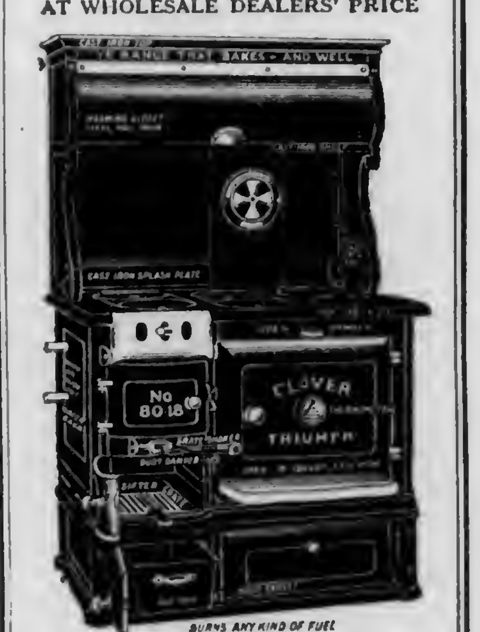

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	Days	Corn	Meat Meal	Wheat Middlings	Weight
No. 1	218	442 lbs.	33 lbs.	31 lbs.	296 lbs.
No. 2	156	148 lbs.	9 lbs.	14 lbs.	299 lbs.
Gain or Saving	62	294 lbs.	24 lbs.	17 lbs.	3 lbs.

No. 1 had no butter milk. No. 2 had all they would drink. You can do as well or better.

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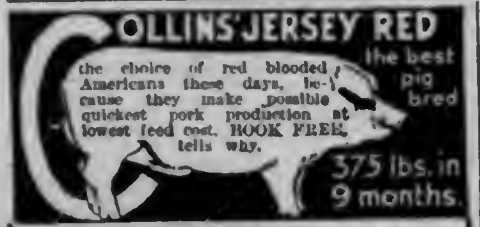

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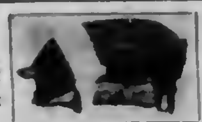

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Veterinary

Conducted by W. C. Fair, V. S.

Advice thru this department is free to our subscribers. Each communication should state history and symptoms of the case in full; also the name and address of writer. Initials only will be published. We cannot make reply by mail. This is one of the most valuable columns of the paper and we invite readers to make use of it. Clippings from this column, when properly preserved and classified, make one of the most valuable medical symposiums a farmer-stockman can obtain.

Lumpy Jaw.—I have a cow about six years old due to freshen in about a month. She has a very large bunch on face under eye, which occasionally opens and discharges pus and corruption. This bunch has been there for several months and it opens about once a week. F. D. M., Elkton, Md.—In chronic cases like this, you had better not use the cow's milk for domestic purposes. If the bone of jaw is diseased, or if the bunch is too large for surgical removal, she must be incurable. It might be well to let her raise her calf in pasture lot by herself. Painting bunch occasionally with tincture of iodine has fairly good effect.

Cough.—I have a cow that coughs some. When exerted she seems to be short of breath. Will you tell me what you believe ails her, and prescribe a remedy? G. C., Marysville, Pa.—I am inclined to believe your cow's heart is affected, besides she may be suffering from tuberculosis. I would advise you to have a reputable veterinarian apply the tuberculin test, with a view of ascertaining whether or not she has tuberculosis. She might have foreign body in stomach, which has recently punctured its wall and is now affecting the heart. Give her 30 drops fluid extract of nux vomica and two drams Fowler's solution, three times a day.

Impure Blood.—Diseased Skin.—I have a mare whose hair is coming off in spots all over her body, but mostly on her neck and ears, also at the root of her tail. She rubs hind parts against stall, indicating that she is itchy. J. S. M., Dumore, Pa.—Wash your mare with soap and water, two or three times a week. Apply one part coal tar disinfectant and 30 parts water, daily. Give her 3 drams Donavan's solution at dose in feed or in drinking water, three times a day, until she gets well. Grass is the best feed for her.

Laryngitis.—Lice.—Several of my hogs are coughing and do not seem to thrive as well as they should. Some of them have coughing spells which last a few minutes. I have been using kerosene and green oil to kill lice, but it seems to fail. Will you give me remedy that will kill the lice. C. A. S., Polk, Pa.—Mix equal parts powdered licorice, ground gentian, ginger and bicarbonate soda, and give each 100-pound hog a teaspoonful at dose, two or three times a day. If you will add more kerosene to the green oil mixture it will kill hog lice. Kerosene emulsion is made by mixing one pound of hard soap in two gallons of kerosene then add four gallons of water. Mix one part of the emulsion in 8 parts water and either dip or apply. One part coal-tar disinfectant and 40 or 50 parts water will kill the hog lice. Kerosene remedies should not be used during the day when hogs are allowed to run in sun.

Indigestion.—Looseness of Bowels.—I have a horse we keep for general work. When driven on road his bowels act too freely. The droppings have bad odor and as he eats lots of feed we believe he ought to lay on some flesh, but he keeps thin. I have thought that he digested his food fairly well. He seems to have a scurvy and itchy condition of the skin, and his hair comes off in small patches. S. C. R., Bedford, Pa.—Give your horse ½ ounce ground gentian and one ounce powdered wood charcoal at dose in feed, three times a day. The feeder can usually help correct an ailment of this kind. Water him before feeding him grain and stint his water supply before driving him on road. Mix equal parts of ginger, gentian, fenugreek and powdered wood charcoal and give him two tablespoonfuls at dose in feed, two or three times a day. Apply one part coal tar disinfectant and 40 parts water to parts of body where skin is most affected.

COUNTY NOTES

Broome Co, N. Y., (SE) June 28.—There has been a steady advance in feed prices all year and farm help is costing more than ever. Old hay is about all gone and is selling at $30 to $32 per ton. Strawberries have been a good crop but season shorter than usual. This week will see the end of them. A Binghampton firm went among the growers and contracted practically the entire local crop at a flat rate of 17 cents per quart, taking the berries from the fields in trucks. The firm made a good thing on the deal as 18 cents per quart was the lowest wholesale price thruout the season and much of the time the price ranged from 20 to 36 cents. The first berries brought 40 cents at wholesale. Growers paid 3 to 4 cents per quart for picking. Farmers are much pleased with the repeal of the daylight saving law. Severe rain and windstorm on June 15 did much damage. Haying has commenced. Have had very cool nights of late, with reports of frosts in some sections.—C. H.

Kent Co., Del., (S) June 27.—Many of the farmers in this section of the state are badly worried over the appearance of their wheat after it is cut. It seems to be infected by some sort of louse that has destroyed a large proportion of the kernels. Some wheat has been threshed. Tomatoes promise to be very late. Vegetable prospects were not very good until the rains of this week. Now everything looks more favorable.—K. P. T.,

Mercer Co., P., (NW) June 26.—We had a very late spring in spite of much preparation in the way of early plowing. Practically all of May was very wet, retarding all planting. I do not remember ever seeing seeding so late, especially oats. Many fields of oats were sown the very last of May and some in June. Corn was largely planted the first part of June. Potatoes were practically all planted in June, some as late as 20th to 25th. After the wet May, June was dry and hot; practically no rain during June except a couple of local showers. The thermometer stood at 90 to 95 day after day and this made the corn hump even tho it was without rain. There will be plenty of knee corn by July 4. A heavy rain today and yesterday is doing a lot of good. Hay will be only a fair crop. Oats will be late and results uncertain. A number of farmers did not sow oats at all. Wheat is undoubtedly the largest crop we have had in years. No harvesting done yet but most of our farmers will start early in July. Prices are good for most everything except horses. Cows, $70 to $100 for grades; six-weeks old pigs, $12 to $15 pair; veals 15 cents pound. Not as much butter made as formerly as many of the farmers are selling to cream routes. Pastures have been hard hit by the dry weather but present rains should revive them. Strawberries were a fair crop and sold out of sight. First pickings went at $7 to $8 per bushel. Black and raspberries promise a good crop. Apples will be small crop and from present indications peaches, pears, plums and other fruits will not be large. Much buckwheat going in. Much hay has been baled and selling at $33 ton.—P. Mc.

Union Co., Pa., (C) June 25.—Hay making is the job on hand now, and the crop is unusually good, with much clover lodged on many fields, making cutting difficult. Wheat is coloring rapidly and will be ready to cut by the second of July, or before hay is all made. Corn has been and is being cultivated the last time, and is growing well. Oats are shooting heads, and promise to be a fair crop. Striped potato beetles are plenty, yet not many young bugs are found, as a striped and spotted fly or bug seems to be eating the eggs of the potato bug, and we hope the latter's number may increase. Sour cherries are a fair crop, but sweet ones are scarce. Strawberries were a good crop, and sold from 12 to 15 cents per quart. Buffalo township road supervisors bought a new stone crusher, grader, engine and roller combined and a water tank to use in making and repairing roads. Luther E. Craumer, of York County, and a graduate of State College, has begun his services as farm agent for Union County.—J. N. Glover.

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PEEL your peaches, pears and plums for preserving with Babbitt's Lye. It saves four-fifths of the time and labor that is usually spent in paring. The U. S. Board of Food Inspection has ruled that this method does not injure the quality or flavor of the fruit.

This is the method used by the big California fruit canners. The hot lye solution peels off the skin without injury to the fruit. It also prevents waste of the best flavored part of the fruit—that next the skin.

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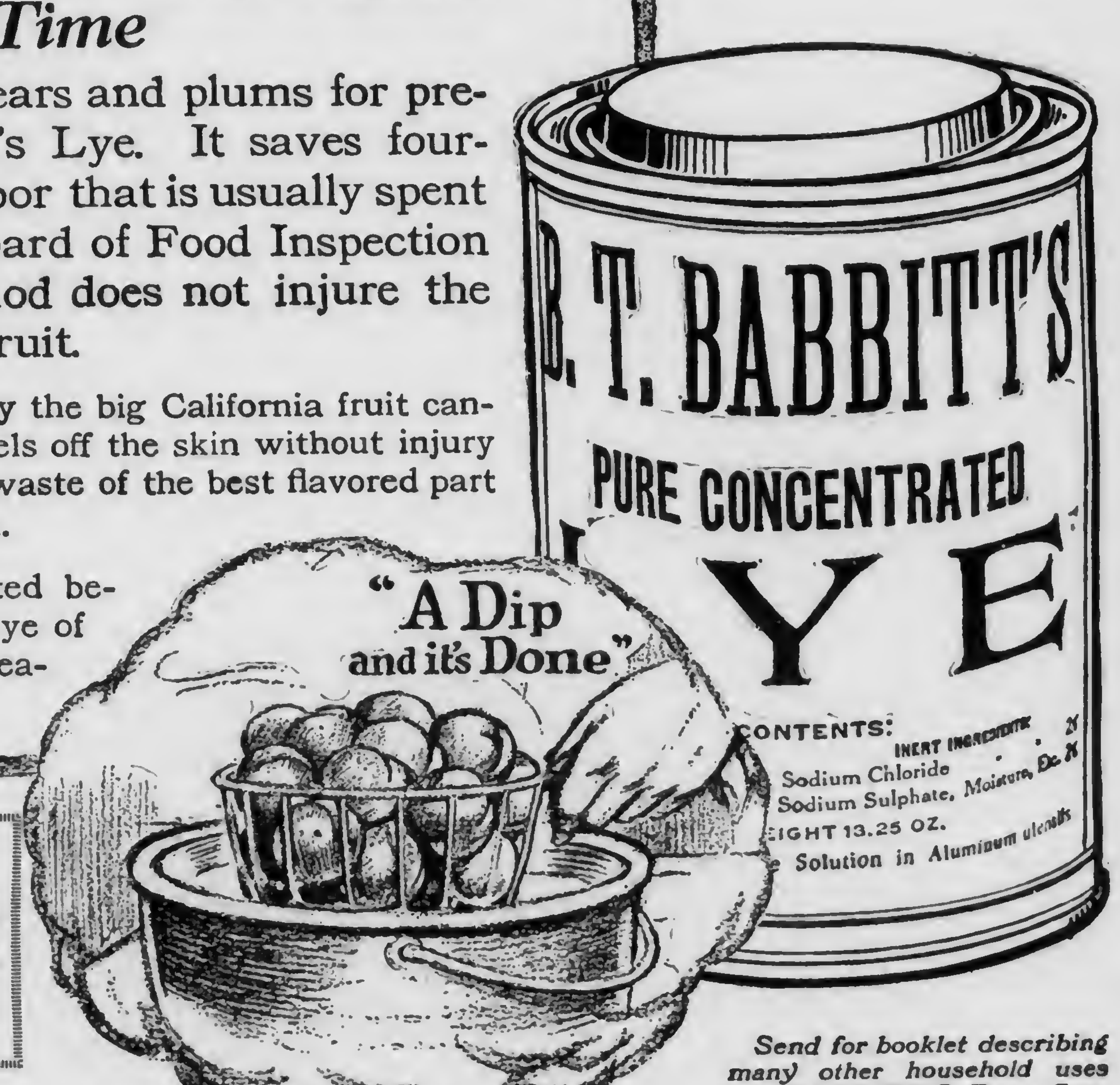

DIRECTIONS

To 9 gallons of water add half a can of Babbitt's Concentrated Lye and half an ounce of alum. For small quantities of fruit use one gallon of water, 4 tablespoons Babbitt's and a pinch of alum. Place fruit in a wire basket or thin cloth and suspend in the boiling solution for two minutes. Rinse thoroughly in cold water and all the skin will come off.

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Bred to Lay S. C. WHITE LEGHORNS. Don't buy an egg or chick before you get our free catalog. SLATY RIDGE POULTRY FARM, Box 5, PALMYRA, PA.

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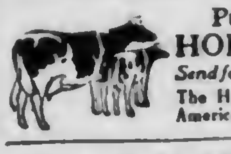

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PENNSYLVANIA FARMER

AGRICULTURE THE KEYSTONE OF NATIONAL PROSPERITY

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Protection Against Lightning Losses

Practical Suggestions on Installation of Lightning Rods on Farm Buildings

By F. W. KNIFE

PENNA. STATE COLLEGE

Readers have asked for directions for installing lightning rods on farm buildings. Lightning takes an enormous toll of life and property annually. Some of this loss is unpreventable but for the most part it can be avoided if proper and adequate precautions are taken. Scientific experiments have proven beyond doubt that protection against lightning is possible. In fact, many insurance companies recognize this and provide lower rates of insurance for properly protected buildings.

This article will deal very briefly with the cause of lightning. There is scarcely anyone who does not know the effect. Protection against such a destructive force will be discussed in detail.

Electricity is supposed to be generated in the air by drops of water breaking up as they fall toward the earth. Some of these droplets are charged positively and others negatively. Negative charges are diffused thruout the air while positive charges continue to collect until a high electrical pressure prevails, which discharges itself toward some point or object charged with negative electricity. This gives the brilliant flash. Since the earth is always supposed to be negatively charged, and since this high electrical pressure will jump across several miles of space, it may be readily understood why the earth will receive many discharges, against which property must be guarded.

Kind of Equipment

Several factors influence the kind of equipment used for protection, some of which are: The sum of money desirable to invest in protection, value of property protected, and whether the protection of human or animal life is involved. However, the best equipment is always the cheapest, and since all follow the same principle, the one considered best will be discussed in this article. Let it be said that three types of equipment may be used: First, copper cable, using copper thruout. Second, iron conductors and fittings. Third, inexpensive equipment consisting of any good conductor of electricity, properly installed. The first of these, the copper cable, is by far the best but it is considerably more expensive. It is easier to install, is least subject to weather action, and affords the greatest protection.

The materials used are generally classified under four headings as follow: Conductors, keepers or fasteners for conductors, aerial points and supports, and grounds. When installing this equipment care should be taken to avoid using two different metals either for connections or for fasteners. Copper should be used thruout in order to avoid electrolytic corrosion which will, within a few years, destroy the effectiveness of protection.

Farm Buildings Properly Equipped With Lightning Rods

Copper cable consists of several strands of copper wire woven together to form one large wire or conductor. This cable is quite flexible, which makes installation much easier than with iron wire. Furthermore, it may be secured in lengths of several hundred feet, which allows for a fewer number of joints and fittings. Elimination of joints is desirable, because every one requires time to install and if the proper joint is not made each time, the whole system may become useless. Copper cable should never be painted.

There are many different shaped fasteners obtainable, almost any of which may serve their purpose. The building to be protected will largely determine which type to use, because the fasteners must be adopted to certain uses. That is, the same fasteners cannot be used on a shingle roof that can be used on slate, nor can the same be used on a brick wall that can be used on a wood wall. Generally, some fastener which can be screwed into place will best answer the purpose. This fastener should be made of the same material as the cable—copper for copper and iron for iron. It must not clasp the cable firmly but must allow for expansion and contraction during temperature changes. Otherwise this fastener would become loosened and no longer serve its purpose.

The idea that fasteners must be insulated from the building is no longer held. An electric current follows the course of least resistance, which is the copper cable. Therefore no insulation is necessary.

Aerials, like fasteners, are of many kinds any of which may be good if properly installed. Some have one point extending into the air while others may have many points, these being used more for decorative purposes than for effectiveness. Aerials have two uses: First, to discharge any static electricity which may be over a building and which tends to draw the lightning bolt toward it and, secondly, to direct the lightning stroke so that it discharges thru the cable into the ground. Care should be exercised in erecting them so that they are not blown down during heavy storms. One of the best means of erection is by using a tripod-shaped affair, which can usually be purchased with the aerial and which, if properly erected, will stand permanently. Points should be sufficiently large and heavy to withstand, without fusing, the high temperature they are subjected to when "struck." One large point is usually considered better than several smaller ones.

Grounding the System

Grounding this system is the most important feature of the whole affair. Without proper ground connections being made, the system is worse than useless because it will attract a bolt of lightning and then not conduct it away. One of the simplest methods of grounding is to connect the copper cable to some underground water pipe, provided it is absolutely known that such pipe passes thru a stretch of ground that always remains damp. Otherwise, never attach the system to such a pipe.

If no such pipe is available it will be necessary to provide some other means of grounding. In doing this several things must be considered. First, the soil forming the grounding must be permanently damp. Second, the area of contact between metal and ground must be ample—better too much than too little. Third, the metal in the ground must be properly connected to the conductor. Fourth, some grounding metal must be used that has as little tendency to corrode as possible.

A dry soil is a very poor conductor of electricity and a wet soil is a good conductor. Therefore it is necessary to bury the grounding deep enough to insure dampness, even in time of dry weather. Sometimes permanent moisture cannot be reached because of too shallow a soil, in which case other provisions are necessary. This difficulty may be overcome by greatly increasing the surface of metal exposed to the ground, and is sometimes done by digging a trench completely around the building and burying the ground wire in it. If permanently damp ground is available, the wettest should be selected.

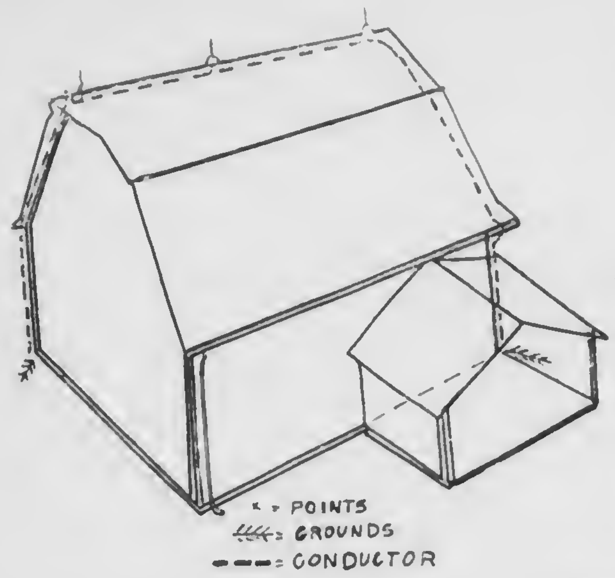
The area of contact depends somewhat upon the soil dampness, but if reasonably damp and a copper plate ground is used, a plate having an area of about ten square feet and a thickness of one eighth of an inch will be sufficient and will withstand corrosion for a long time. A plate of this kind should be placed in a bed of charcoal, eight or ten inches in thickness, the charcoal holding the earth permanently moist. Sometimes stranded cable grounds are used, in which case the strands should be separated for six or seven feet from the outer end, or even longer if the trench in which it is to be buried is shallow. These cables should also be buried in finely ground charcoal. Main conducting cables should be grounded at both ends, as should branch cables from each aerial unless the connection between branch and main is very short.

Any connection between ground and conductor must be properly made. Otherwise a discharge of current may not take place. If two different metals are used as ground and conductor, it is a good plan to imbed them in concrete at the point of connection so that corrosion will not take place. The best grounding materials in order of their durability are copper, bronze, aluminum, and cast iron.

Installing the System

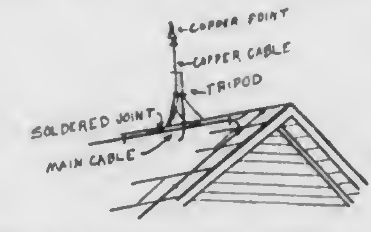
Each building is a problem in itself which must be worked out before installing equipment. Herein are given only suggestions which apply to all buildings. In the first place, the conductors should be run in as straight lines as possible. Wherever turns or bends are necessary, make them with radius of not less than one foot; not abrupt like a right angle. Where end-to-end connections are necessary, a connection of the same metal should be used and the two soldered together. Where connections between branches and the main line are made they should be soldered together. Likewise aerials and conductors should be soldered together and abrupt bends avoided. Fasteners usually are placed about six feet apart except where going over the edge of a roof or in other instances where different spacing may be necessary.

The number of aerials to erect on a building will depend largely upon the number of high points on the building. Generally speaking, on a roof without a chimney or other conspicuous high points, aerials are spaced not more than 25 feet apart along the ridge. On extensive flat roofs it is necessary to place aerials not only along the edge but also within the edge. Each chimney, peak, gable or other elevated portion of the building should have an aerial placed on it. Aerials should extend about four feet above the roof ridge and about eighteen inches above chimneys. Short aerials may be provided for peaks, steeples and other pointed projections.

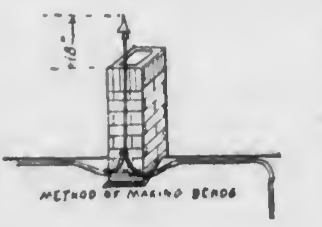


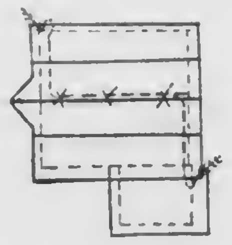
PROTECTION OF SMALL BARN

Metal roofs or other roofs on which there is any metal work, such as gutters and down sprouts should be carefully connected to the conducting cable. If the gutters or down spouts are very long they should be connected at both ends and all connections soldered. If these metal parts of the roof are left unguarded they may cause fire by permitting a lightning bolt to ground thru the building. Also any interior metal work, such as braces and supports which extend parallel with the conducting system for any distance, should be securely grounded. If these are not grounded they have a tendency to attract the bolt away from the conductor and, not being properly grounded, the current is forced to ground itself thru the woodwork.



TRIPOD SUPPORT FOR AERIAL



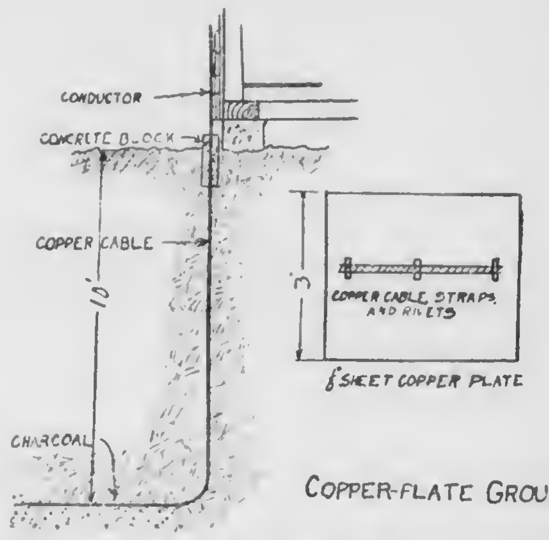


Frequent Inspections

All the precautions enumerated should be strictly observed if the protective system is to be relied upon. Another precaution is that of periodic inspection. Without this the system may get out of commission and become worse than useless. For instance, if a break takes place anywhere between aerial and ground, the aerial will still have a tendency to attract the lightning without means of grounding it except thru the building. When any defect is found, repair it immediately and insure protection.

The illustrations and much of the material in this article were derived from Farmer's Bulletin No. 842, which may be secured by addressing the U. S. Department of Agriculture, Washington, D. C.

The rodding business was discredited for many years because of the unscrupulous business methods of its early promoters, but the principle of lightning rod protection is now generally recognized as scientifically sound. Perhaps no system of rodding will give absolute protection, but a good system, properly installed, is the best protective agency known. Insurance companies endorse the rodding of buildings.



COPPER-FLATE GROUND

WEAK POINTS IN FARMING---I

By R. L. Scharring-Hausen

The author of this little series of articles has spent a good part of his life in a large city, and has been for some time making a living on his own farm in a practical manner in which he expects to continue. It is apparent to him, as to the vast majority of farmers, that "there is something the matter with farming." The statement is commonly made that there is no money in farming. It is evident that there is money to be found in the cities, because of late years the trend of population has been city-ward. With the viewpoint gained from having lived in both city and country, the author would like to discuss "Three Weak Points in Farming," as they appear to him.

City Ignorance of Farm Conditions

The May issue of a leading high class woman's magazine has for its cover design the picture of a child plowing with the plow attachment to a hand cultivator, such as is used in small gardens. Altho the artist is of nation wide reputation as a depecter of child life, she has shown this four year old tot turning a heavy sod, with the mold-board of the plow where the landside ought to be! Of course the idea of the child plowing is a fancy; but the wrong position of the plow parts makes it a joke. Let it stand as an example of city ignorance of farming!

A generation ago a large proportion of city people was farm raised. Today many of them have never been in the country. What knowledge they have of farm conditions is a distorted vision gained from the city press, in which the farmer leads a nice, easy independent life, and gets rich profiteering! Just because the city man pays ten cents for the glass of milk that washes down his restaurant sandwich, it doesn't mean forty-cent milk to the farmer! In retailing fruit in the city, I have often been greeted by the following, meant in all seriousness: "Can't you sell me those apples for less? All that you have to do is to pick them!"

Of course, the housewife didn't consider such items as interest, taxes, risk, pruning, spraying, cultivating, cover crops, picking, storing, marketing, which were behind the apples—she knew nothing about them! She assumed that they grew without attention, that I picked them—sort of a lark, picking apples—and that the money was accordingly clear profit. An example of similar ignorance on a large scale came to my attention when the war broke out. At that time interest was centered upon food production. A number of well-to-do business men, in a town not far from New York, subscribed ten thousand dollars, secured a hundred acres of land lying idle under real estate speculation, had it plowed by tractor, and turned it over to the local Boy Scouts to farm! Some of this land had not been plowed in years, and had first to be cleared of brush. It was expected to yield bumper crops of vegetables—parsnips, beets, and onions as well as sweet corn and beans, and to net one hundred dollars an acre, that the estimable gentlemen might get their money back! The boys were young and inexperienced many of them had never worked before—and the result can be imagined! To complicate matters, it was intended that the work should be laid out two weeks in advance, and done per schedule—so many days, so much work—with no allowance for rain, of which there was plenty. And it was originally supposed that all the tools necessary to work this vast area of truck, after the land was plowed, would be a hoe or a rake for each boy!

These two instances, out of many, are but examples of the city man's ignorance of actual farming conditions, and the problems of the real producer of food. I believe that the farmer of today understands city problems better than his own problems are understood by his city cousin. The newspaper which the farmer reads reflects the city attitude, but the farmer has no means of presenting his side of the story. It is to the interest of both consumer and producer to cooperate, but where ignorance exists, and is fostered unconsciously or deliberately by the city press, there can be no understanding.

However, this ignorance can be enlightened without too great difficulty, by bringing the farmer's story to the city.

Advertising

Not so long ago the great meat packers were subjected to a Government investigation. To carry popular favor and present a good case to the public, they conducted an enormous advertising campaign, emphasizing the smallness of their profit per pound of meat handled. To the unthinking public, this appeared well. Nothing was said about the profit per dollar invested, the real point at issue, however. At present a great watch company is running a series of advertisements that shows the various steps in the manufacture of their timepieces. No business house today would long survive if it did not keep before the public eye constantly thru advertising. And advertising offers the best means of presenting the farmer's side of the case to the consuming public—just what enters into the cost of a basket of apples or a sack of potatoes in time, risk, money, and effort, and what a disaster a late freeze or a wet spell at planting time may be. Of course, extensive advertising is costly, and the individual farmer can do little more than patronize his local paper in that line. It remains for him to acquaint his own customers with conditions as they exist by word of mouth to those he sees, and by folder or leaflet ot those to whom he ships eggs and fruit. His Potato Growers Associations and Horticultural Societies must bear the expense of wider advertising but he will share in its results.

Consider how the advertising done by the Dairymen's League last winter changed the attitude of the consumer, as well as the press, from hostility to sympathy. And the sympathy of the press is well worth having for a bit of favorable editorial comment does a lot of good.

DRILLS FOR COVER CROP SEED

The modern sower who goes "forth to sow" does not take a chance on some of his seed falling on stony, thorny or thin soil, but uses a drill and gives 100 percent of his seed a chance to bear 100 fold.

If seed such as rye, vetch or cow peas is drilled in with a suitable implement every grain is covered at the most suitable depth, where there should be moisture enough to germinate it and carry it thru summer drought. Seedings can be cut down about one-third in quantity where a drill is used, which will mean the saving of several dollars per acre.

All seeds are expensive this year, and vetch, the most satisfactory cover crop of all, is especially high and scarce. Some of the oldest and most successful vetch growers find that ten pounds of vetch put in with a drill in mixtures gives them excellent stands, if sown in good season.

A five-tooth drill to go between the rows can be bought for $25 to $30 so that its price can easily be saved in a single year. A disk drill will cost about $20 more, but in rough, weedy fields it will not clog and is worth the difference.

It takes but little more time to go thru the rows with a drill than with a cultivator and the whole job of sowing and covering is done at one operation. A fertilizer box and a grass or clover seed box can be bought extra and attached to the drill if it is desired to stimulate the cover crop or sow grass or clover with it.

One drill will serve to sow many acres of cover crops in a season and can be used jointly by a number of farmers or hired out at a small rental per acre, so that as a community proposition, it is a splendid investment, especially where farms are small.

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PHILADELPHIA, PA., JULY 19, 1919.
VOLUME 46 NUMBER 3

Our job is to serve our readers. Whenever and wherever we can help you, write us.—The Editors.

Icing Charges

FRUIT and vegetable shippers are confronted with serious financial loss if the proposed freight increase on perishable products is enforced. The new schedule proposes an icing charge of $35 per car as compared with a previous cost of $8 per car. Here is a need for the strongest farmers' organizations to make a thoro investigation of the justice of the proposed increases and see that farmers' interests are adequately represented.

Packer Activities

THE Federal Trade Commission on July 11 issued a further statement on approaching domination of the nation's food supply by the five largest packing companies. The statement is summarized by the charge that the five big packers jointly or separately weild controlling interest in 574 companies, minority interest in 95 others and undetermined interest in 93, a total of 762 companies. Further, that they produce or deal in some 775 commodities, largely food products. There is no effort in the statement to charge or prove unjust practice or manipulation. Collusion is indicated by the perfect understanding between companies and a division of territory and commodities handled. The statement is enlightening and should provide material for wise control.

Tractor Demonstrations

TWO large tractor demonstrations are scheduled for this state this season. The first will be held at Harrisburg, August 12 and 13, and the second at Butler, August 21 and 22. These events will be under the direction of a committee representing the manufacturers, the distributors, the state college of agriculture and the county agents. The demonstration grounds have been well selected and there will be an opportunity to see the tractors in operation on the various forms of farm work. It is expected that at least thirty machines will be entered, making a demonstration well worth the time of any one interested in these modern implements.

The committee is wise in restricting the number of demonstrations and eliminating the competitive features. Many so-called demonstrations have been advertised with only two or three machines showing. Farmers do not have the time to make long trips simply to see a few machines displayed. The advertised competition in speed, fuel consumption, etc., proved little and was often misleading. Farmers want to see the machines operated as they are expected to be operated in the practical work of the farm, not as they are being "shown off." That is the opportunity that is offered in the two demonstrations to be held. In addition, there will be lecture periods in which features of care and handling will be discussed by men familiar with the different makes. If you are thinking of buying a tractor now or in the near future, a trip to one or both of these demonstrations will be well worth while.

Fall Fertilizers

FARMERS are now giving attention to fertilizers for fall use. The downward tendency in prices is a hopeful relief from conditions prevailing thruout the war period. A little careful study of furmulas and soil needs will add even greater saving. Farmers may well investigate the standardized analyses toward which the fertilizer companies are now working. The purpose is to eliminate the fractional analyses and establish certain standard grades for use on different types of soil and for different crops. This would also eliminate the very low grades of goods which have always been expensive when considered from the standpoint of fertilizing elements contained. It may be put down as a rule that the man who buys mixed fertilizer on the basis of low price per ton pays most for the available plant food he actually gets. Fertilizers should always be purchased on the basis of composition and quality and not on the basis of price per ton.

Prohibition Echoes

ALTHO the majority of the daily papers seem to be neutral if not opposed to the war-time prohibition they do give inconspicuous news items showing the very noticeable decrease in arrests for crime. Some city police courts, notorious for the number of cases for disorderly conduct heretofore, are almost devoid of business. Altho the law has been in effect but two weeks the results in this respect are making those who, heretofore, were lukewarm on the matter sit up and take notice and the principle of permanent prohibition is gaining converts everyday. It is an exhibition of narrow provincialism on the part of city papers to assume that popular public opinion is not behind the law simply because that which they are acquainted with — city sentiment — is largely in opposition, and even that is true only of the East.

Immigration Bogie

THE American Federation of Labor in recent convention and more recent activities is making desperate efforts to secure restriction of immigration as a protection to the American laboring man. Under a general protection policy, labor has the same right to protection as has any of the products of labor. But under the conditions as existing at present the immigration bogle appears to be more fancied than real. There were some 10,500 male immigrants admitted to this country during the month of April. Figures for later months are not available, but authorities are agreed that the movement is not materially increasing. On the other hand there is scarcely a day when less than 10,000 foreigners are applying for passports for return to European countries. Instead of dangerous competition in the labor market, the present tendency promises to further deplete the labor supply, and it will be but a few months before this country will be seeking hands for common labor tasks. Farmers will be indirectly affected, as reduction of labor supply in the cities is certain to make further drain on the labor of the farms.

Pedigreed Scrub Hogs

THE Federal Department of Agriculture warns new breeders of hogs against what it calls the "pedigreed scrubs." The warning may apply to all classes of farm live stock, and perhaps to human animals. The animal that has been bred along pure blood lines and has a pedigree to show purity of breeding may be expected to breed true to type and prove more valuable and more certain than what is known as a scrub. But it is well to remember that there are exceptions to the rule and it is possible for a purebred to show striking scrub characteristics. It is well to remember too, that type must be worth while to be worthy of perpetuation. All pedigreed animals are not good animals, and all scrubs are not worthless, as pointed out in the article on page 8 of this issue. Knowledge of values and skill in selection must accompany the pedigree in wise buying.

But why are there more "pedigreed scrubs" among hogs than other classes of farm livestock? We have asked a number of farmers who have traveled extensively in farming sections what class of animals shows the highest general standard. The reply is almost certain to be that there is a greater uniformity of type and general characteristics among hogs than any other class of animals. This does not necessarily mean that the hog standard is higher. Perhaps it is uniformly low. Have we more to learn in the breeding of hogs than in other classes of live stock?

Meat Prices

ON March 1 of this year medium and good beef steers were selling on the Chicago market at from $13.50 to $18.50 per cwt. By July 1 they had dropped to $12 to $14.60 per cwt. There was a decline of $1.50 to $3.90 per cwt., of 14 percent. On March 1, choice and prime beef steers were selling at $18.50 to $20.25 per cwt. By July 1 this class of animals had dropped to $14.35 to $15.50 per cwt.; recording a decline of $4.15 to $4.75 per cwt., or 23 percent. On a 1,200 pound steer of the first class there was an average loss of $32.40, and on the second class a loss of $53.40 in the four months' period. To the farmers who paid from $10 to $12.50 for feeders last fall, fed them on high priced hay and grains, employing high priced labor, the loss was not only on the decline but on the materials fed.

Farmers increased their feeding business at the urgent request of the government officials. From exports of 151,000,000 pounds of beef products in 1914 the production for use of our army and our allies grew until in 1918 we exported some 590,000,000 pounds. This was done in the face of many previous disappointments and discouragements. The individual losses this year will do much to reduce production to pre-war conditions, and the loss will be to the country at large and not confined to the feeders who will turn to other activities and other markets for their grains and forage crops. The U. S. Department of Agriculture recognizes the national need of maintaining our cattle business and has started an inquiry into causes of the recent declines.

The reduction in demand for supplying our army and navy, and loss of considerable of the foreign demand because of increased shipping from South America and other beef producing countries is apparent to all. But the Department also finds that there is a slack demand for beef at home. It credits this decline to the mistaken idea of the public that meat conservation is still necessary to feed the people of Europe. Its urge to the people to eat more beef and mutton is timely, but its further findings on comparative prices of cattle on foot, the wholesale price of beef and the retail prices of cuts of beef supply a further explanation of the restricted buying.

On March 1, medium and good dressed beef carcasses were selling on the Chicago market at 23 to 26 cents per pound. On July 1 they had fallen to 16 to 19 cents, a decline of 28 percent. On the Philadelphia market for the same grades of carcasses the decline was from 23 to 25 cents on March 1 to 19 to 22 cents on July 1, or a reduction of 15 percent. The decline in wholesale prices varied in different cities with 23 percent in Washington, 24 percent in Pittsburgh, 29 percent in Boston and New York. The average reduction in the cities named may be represented is about 24 percent.

During the same period retail prices have not come down in proportion. On sirloin steak, Philadelphia markets show a decline of 16 percent, but only 11 percent on porterhouse steaks, 3 percent increase on round steak no change on rib roasts and an average of 5 percent on chuck roasts. There was an average decline in seven cities of 11 percent on sirloin steaks, 13 percent on porterhouse, 2 percent on round steak, 13 percent on rib roast and 11 percent on chuck roast. The average decline in retail prices as shown by the seven cities under study may be represented as about 10 percent.

Thus the declines in the four months' period on the three classes has been about 19 percent in cattle prices, 22 percent in wholesale prices and 10 percent in retail prices.

RRISBURG LETTER

gress of the Laws.—Half of allowed the governor to dis- of legislation left with him by eral assembly when it finishes ork has passed and Governor has made appreciable pro- in the great task confronting nd there are signs that he may pon the appropriation bills instead of holding them around olitical asset until the end of irty days allotted. In the last the governor has had a com- survey of the finances of the made for him which is said to strate that he can go $10,- beyond the May margin of of appropriations which was 0,000. The appropriations over $104,000,000, but this will The governor also signed numerous changes in elec- ws, various highway matters, ing changes in roads; the trac- gulation bill, which gives the way commissioner authority to machines tearing up highways roads; the mothers pension; s' salary increases; bureau of and state police bills. Of 0 bills left with him by the ure less than fifty of general ance remain and many of are appropriation measures.

ganizations Held Up.—The or has been so occupied with nsideration of bills that the for reorganization of the De- ent of Agriculture, among , have not been taken up. Sec- Rasmussen has worked out a l plan which is said to con- ate some changes in personnel considerable extension of ac- The half year enjoyed by the ary while the legislature was sion enabled him to look over tuation and to learn the ways pitol Hill. It is generally be- that there will be an effective built up, one that will be re- ive to calls for help from the s and the barns.

reau of Markets.—The new bu- of markets bill is now a law more power is vested in that one than there was in the whole rtment of Agriculture twenty s ago. The man to head it has yet been named but various gs in the way of establishment of dards for fruit baskets and the , plans for extension of coopera- e organizations and investigation the complicated system of trans- ation rates with which this state rs is afflicted have been under- Secretary Rasmussen has n hunting some one to take hold e job who will give it complete ation and day and night thought feels confident that with the vernor personally interested in the osition the bureau can be made mportance.

lephone Rates Go Up.—The ner in which the telephone com- es are advancing rates is inter- The jumps are coming just a time when there is all kinds of about wires being returned to corporate owners and to a man ting on the fence it would look as a healthy crop of litigation was g sown. The Public Service Com- n's authority was set aside by United States, but before long tate body is going to be the re- ng power and there will be drops in rates or else some fees for lawyers.

hard Damage.—While Secre- Rasmussen is not inclined to the that damage to the wheat and crops will be as extensive as he is dubious about oats and Reports that are not encour- have come here concerning the e and peach orchards, especially thern Pennsylvania, but they e been known before. The secre- is reserving judgment until definite information is avail-

e Stale-Egg Law.—It is now ful to offer stale eggs for fresh ennsylvania. It has been so for under the general laws, but the governor has approved an aking a specific penalty for a who offerings stale eggs for This will end a certain traf- nd source of complaint, in many ban communities. Incidentally, the ew cold storage law is now effective as a result of the war the period orage has been made one year r everything in the way of food, nothing unwholesome may be stored or sold after being taken from storage. Placarding of everything taken from cold storage and offered for sale so that the buyer may know that it is cold storage food and right of the state to make searches are contained in the new act.

Taking Over Toll Roads.—After a lapse, due to lack of funds, the state Highway Department has resumed taking over toll roads in the agricultural counties of eastern Pennsylvania. The belief is that three or four years will see the last toll gate gone from Pennsylvania, but prices, like those which have to be paid for construction now, are steep.

Must License Dogs.—The state has caused arrests of scores of men in eastern counties the last fortnight for failing to take out licenses for dogs under the act of 1917, which was not changed this year. This is only the start of a vigorous movement to round up the animals whose owners do not care enough for them to pay a dollar and which are a menace to sheep raisers.

Can Shoot Blackbirds August 1.—Under the amendments to the game code black birds can be shot August 1, instead of September 1. This is a movement made because of damage done to crops. The protection is off the red squirrel and put on the skunk and the muskrat, altho owners or occupants of lands may kill them at any time if they are a nuisance. Trout may now be caught without regard to length and special devices can be used under permit from the State Department of Fisheries.—Hamilton, Harrisburg, July 14, 1919.

NEW YORK LETTER

Maple Syrup Makers Meet.—The Maple Sap Products Cooperative Association of Cortland County has held a meeting, paid its bills and made plans for next year's work. Fifty cents a gallon was reserved as a working capital. The prices received was $2.50 a gallon on all but one order. The association had much to learn of business methods, chief of which was that the packing or crating of shipments can be trusted to but one person or department, that barrels are safest for shipping and that an efficient, tactful agent, bearing the credentials of the organization is a necessity. Wholesale grocers, hotels and restaurants were the chief purchasers this year. The association was able to raise the price of syrup 50 cents to $1 a gallon in this entire section.

Extension Work Cut.—This state will get but $58,600 a year for extension work, instead of the $160,000 from federal funds it has had, due to the false economy of Congress in cutting the appropriation bill for that work. This work was doing more to benefit the public than any other undertaken, and was beyond question a worthy cause. The reduction from $4,500,000 to $1,500,000 seems too parsimonious for belief, in face of the fact that Secretary Lane's project of reclaiming land for returned soldiers, condemned by all practical agriculturists, is to get a $500,000,000 appropriation.

Seed Potato Demand.—Farm Agent A. S. Merchant of Cortland has made a trip thru Long Island and New Jersey potato fields, and reports that without exception Cortland seed sold to these growers are giving better results than other seed. The demand is sure to be great for this seed and the growers of this county will meet soon in the interests of keeping up their high standard.

Rural Mail Hearing.—The biggest delegation that ever left this state for Washington attended the subcommittee hearing on the proposal of the Norman J. Gould bill to restore all rural mail routes as they existed April 1. Their plea was presented by Sherman J. Lowell, master of the State Grange, supported by W. W. Magee, Senator from this state and other well known leaders.

Hay Associations.—The farm bureau of Otsego County has employed a manager, for their hay association. The directors are receiving hearty support of the members and branch organizations are being formed with 200 acres of hay pledged as a starter. Montgomery County has a successful hay association of longer standing. On March 1 it had handled 4,588,443 pounds of hay at a commission of $1 a ton. All expenses had been paid and there was $254.34 in the treasury.

Manager Selected.—The Onondaga County Milk Producers' Association has employed J. H. Feall, for three years the successful farm bureau agent for the county, to act as manager of the association and to push to completion their new $250,000 milk plant.

Reduced Rates on Show Stock.—Breeders of exhibition stock in the state are interested in the new rules reducing fares on shipments of live stock for fairs, etc. The change means a virtual free carriage one way, if no transfer of ownership occurs, but shippers must run their own risk of loss, or else carry insurance.

Potato Experiment.— Experience in fighting the green plant house on potatoes in Orange county, where an epidemic of the best prevailed last year, showed that turpentine in the proportion of two quarts to 50 gallons of water, adding 1½ lbs. of soap, was the only effective control, after trying fish oil sprays, kerosene emulsion and nocoture sprays. The foliage was not injured and the spray will be used again this year.

War on Milk Trust.—Mayor Hylan of New York City asks Robert E. Dowling, chairman of the Governor's milk commission to secure authority for the district attorneys of the state to prosecute all dealers in milk who have recently raised the retail price of milk a cent a quart. He urges general revolt of the people against this sort of profiteering in a season when milk is most plentiful.

Wool Sales Made.—The sales committees of the wool growers of Tompkins, Tioga, Cayuga, Seneca and Broome counties have sold their clips at 62½ cents a pound, the highest price ever secured here. Onondaga county had already sold its clip of 10,000 lbs. and Otsego is negotiating its sales of 35,000 lbs. to the same purchaser.

Machine Ditching Shown.—On July 4 a big crowd of farmers of Cayuga County witnessed a demonstration in machine ditching at Sennett, the occasion being a general picnic and speaking by B. B. Robb, head the of farm mechanics department of the State College. The ditcher is in the county under the management of the farm bureau, with two expert operators to run it.

NEW JERSEY NEWS

Milk and Cream Licenses.—Hundreds of dealers in milk and cream in this state during the week secured licenses to operate their businesses from the State Department of Agriculture. This action followed the issuing of a warning by Alva Agee, secretary of the department, who directed attention to a law of the 1917 session of the New Jersey Legislature, requiring all dealers in milk and cream who purchase by contract or otherwise from producers to have a license issued by the state.

Automobile Tour by Poultrymen.—The Mercer County Poultry Association is now arranging an automobile tour and picnic for its members and their women relatives and friends. Carroll H. Hoagland, president of the organization, has been given charge of making up the itinerary, which will embrace a greater part of the county. The plans provide for visits to the various poultry farms in this section of the state to be followed by a supper to be enjoyed in picnic style at a point yet to be decided upon.

County Agricultural Board Meets.—The quarterly meeting of the Morris County Agricultural Board held in the court house at Morristown was featured by Prof. Alva Agee, secretary of the State Board of Agriculture, who spoke on "Keep Your Eyes Open to the Future, Mr. Farmer," and Dr. L. A. Clinton, director of extension work at the New Jersey College of Agriculture at New Brunswick. The meeting was attended by every member of the county board, while a number of prosperous farmers from Morris County, who personal friends of the speakers, also enjoyed the talks. A luncheon followed the meeting.

Rain Helped Crops.—Meadows and pastures have considerably revived owing to rains that fell during the week and are fair to good, while peaches, tomatoes, peppers and sweet potatoes are also fair to good, but apples are only fair in the greater part of the state. Some plowing is being done for late potatoes, cranberry beans and vetch in southern sections, where the second cutting of alfalfa has been started also. The rain came in time to give the newly seeded grass a good start.—Kelly, Trenton, N. J.

You cannot catch the high market prices with horse transportation

Many a tired driver has pulled his team into market to find that prices have weakened while he was on his way.

A reliable motor truck would have made the trip in a fraction of the time and made a handsome extra profit on the high market.

The farmer who controls his transportation also controls his profits.

Buy transportation, not merely a motor truck. Packard trucks give cheapest mileage—One truck easily takes the place of four horses—there is no Packard truck yet old enough to show how long a Packard will last in farm work—Many a Packard truck has gone over 100,000 miles—with its consequent low total transportation cost and low upkeep. Let us make you an analysis based upon your own needs. No charge. No obligation.

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TRENTON, 103 S. Clinton Ave.
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WILLIAMSPORT, 500 Campbell St.
WILMINGTON, 219 W. 9th St.
CAMDEN, 1129 Haddon Ave.

Farm Products Prices and Prospects

WEEKLY MARKET REVIEW

Markets Irregular

Tone continued rather weak, price advances being in cantaloupes and tomatoes, while declines occurred in potatoes, peaches, melons and dry beans. The list of important carlot lines was short, most markets being largely supplied at this time with home grown products. Shipments increased to 10,718 cars compared with 9,125 last week and with 10,011 the corresponding week a year ago.

Potato Markets Irregular

Market tone continued quite strong in Middlewestern cities, but the trend was downward in Eastern markets. Eastern Shore Virginia Cobblers reacted about 50 cents closing at $4.50-5.50 per barrel f. o. b. shipping points, and ranging $5-6 in Eastern markets altho Chicago and various Western markets closed $6-7. Norfolk Cobblers declained 25c at shipping points, closing $4.75-5.25 per barrel f. o. b. and ranging $4.50-5.50 in Northern markets. North Carolina Cobblers ruled $4 f. o. b. shipping points at the close of the week and ranged $4-5.25 in Northern markets. Oklahoma Bliss Triumphs advanced, ranging 25-35c higher at shipping points at $2.50-2.65 per cwt. sacked.

Onion Markets Firm

Virginia yellow stock closed slightly weaker at shipping points ranging $2.50-2.60 per cwt. Consuming markets were irergular. New York declined to $2-2.25 per bushel hamper, while general range was firm to strong at $2.50-3.25. New Jersey yellow stock closed at $2-2.25 in New York. California yellow stock ranged $6-7.50 per cwt in Middlewestern markets.

Cantaloupes Higher

Advances were general with continued active demand. Markets were excited at Southern California shipping points and the range advanced to $2.25-2.75 f. o. b. for standard 45's, consuming markets also gained about 50 cents ranging $3.75-4.50. Georgia Cantaloupes advanced 25c in Baltimore at $2-2.75 but continued weak in New York, closing $1.25-2.

Peach Markets Continue Weak

Demand is good, but offerings heavy, prices still tended downward. Belles & Hiley's ranged $1.50-1.75 per 6-basket carrier and Elbertas $1.75-2.50 at Georgia shipping points. Consuming markets quoted Carmans 25 cents lower at $1.50-2.25 and Hiley's 50c lower at $2-3. Elbertas closed $1.75-2.50 at Georgia shipping points. Georgia and Alabamas Elbertas closed at $2-2.25 in Chicago.

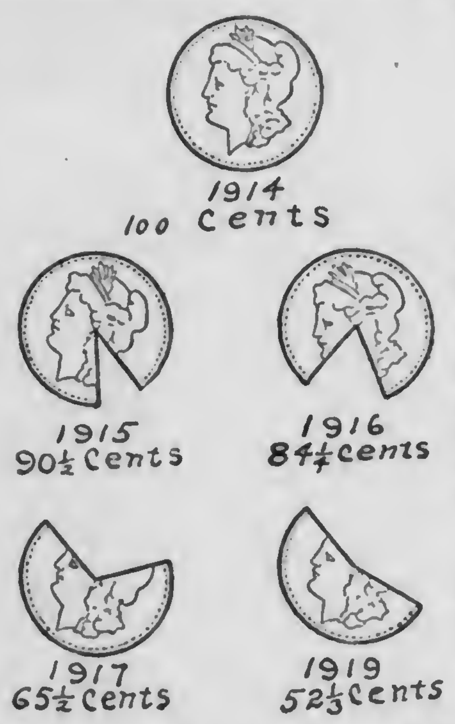
Tomatoes Make Further Gain

Mississippi was strengthened further at shipping points, ranging $1.25-1.75 while jobbing prices averaged about 25 cents advance reaching $1.75-2. Texas 4's strengthened slightly at shipping points ranging $1-1.20 and gaining to a range of $1.65-2 in Terminal markets. Tennessee 4's ranged $1.50-1.65 at shipping points, closing strong and were quoted $1.90-2.25 in consuming markets.

SMALL MUTTON CONSUMPTION

According to figures available, it appears that the consumption of dresed meat, during the year 1918, in United States averaged 150 lbs. per person, of which only three and one-third percent, or five pounds were mutton and lamb. In Great Britain about 22 percent of all meat cosumed is mutton, in France 11 percent and in Canada a little less than seven percent.

Estimates made by the Bureau of Statistics, Pennsylvania Department of Agriculture, indicate that the fourteenth agricultural census which will be taken on January 1 next will show that there are 900,000 sheep in round numbers in Pennsylvania. There has been a gradual improvement during the past three years in this industry, yet the number of sheep is far below what it was some years ago.



The Value of a Dollar 1914 to 1919

THE POTATO ASSOCIATION OF AMERICA

The objects and purposes of the Potato Association of America are specified as follows:

1. The object of the Association is to bring together for mutual coopertaion and coordination of effort all agencies interested in the production, transportation, distribution and utilization of potatoes, and the promotion of the potato industry in all its phases.
2. To create a general interest in better seed, true to name and free from disease.
3. To stimulate the development of new and improved varieties, possessing greater adaptability, to special soil or climatic conditions; a high starch content, greater productiveness, or marked immunity of vine or tuber to disease.
4. To encourage a system of pure seed certification thru field inspection of the growing crop.
5. To raise the standard of market requirements for table stock thru more careful grading and packing, and better eating quality.
6. To stimulate the investigation of methods for the profitable utilization of surplus and cull potatoes.
7. To encourage measures designed to safeguard our American industry against the introduction of disease and insect pests.
8. To establish a more effective system of distribution and marketing.
9. To encourage the formation of cooperative growing and selling exchanges.
10. To promote an interest in potato contests and exhibitions.
11. To establish and maintain a system of crop forecasting for the mutual benefit of its members.
12. To increase the yield and at the same time lessen the cost of growing.

WHEAT CROP CONDITIONS

Cayuga County, N. Y., (Central).—So far as I have been able to observe there is no smut, rust or fly affecting the wheat crop here. But I do not believe that the yield will be as heavy as it was last year. The wet weather early in the season killed out a lot of it. I believe that the wheat around here will average between 20 and 25 bushels per acre. The crop is nearly ready to harvest; some will begin cutting this week.—Albert E. Vannetten, July 6.

Somerset County, Md., (Southeast.)—A number of the farmers in this section have threshed their wheat and it has fallen far below the usual yield. One farm here last year had a yield of 36 bushels per acre; this year it was but 15 bushels. Another farm that had a yield of 22 bushels in 1918 had but 10 bushels this year. Still another had an average of but 9 bushels this year because of rust and fly. This is about the way it is running thruout this country. Early potatoes are being dug; late ones just being planted.—George McDowell, July 7.

Lancaster County, Pa., (Southeastern.)—The yield of wheat has been considerably reduced in southern Lancaster County by a three-day rain that fell the last of June. Very little grain was cut at the time and as a result of the combination of what may be termed almost dead ripe wheat, heavy rains and wind, much wheat is so badly down that the binder knives will not catch it. In some cases mowing machines are being employed to supplement or entirely replace the binder. I believe that the loss to wheat not cut prior to June 30 will be at least 20 percent.—C. F. Preston, July 6.

FARM LABOR

North Carolina: Continues unsatisfactory. Tenantry greatly increased.

Georgia: Labor conditions continue to be unsatisfactory and the situation is aggravated by the weather. Hand labor is needed for hoeing cotton.

Indiana: Supply about equal to the demand at present.

Michigan.—Very scarce.

Missouri: Situation does not appear serious. June 27 several hundred men started from St. Louis to Great Bend, for the harvest. A large proportion of them are ex-soldiers.

North Dakota: Sufficient for present needs but demand will increase sharply with the beginning of haying after July 4.

South Dakota (June 15-21.) Farm conditions have been such the past week that virtually no work could be done.

Kansas: Generally adequate.

Tennessee: Heavy demand for farm labor to clean out crops, with none to be found.

Mississippi: Scarce and inefficient.

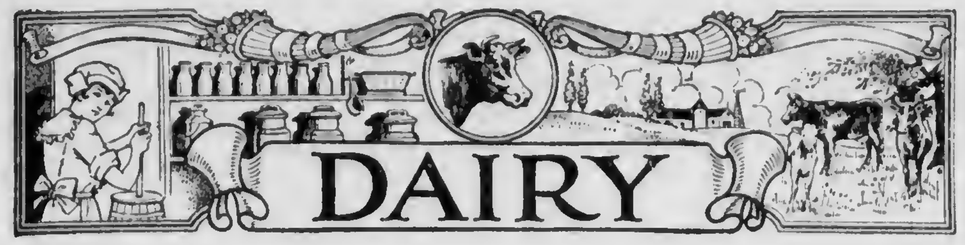
CHILEAN NITRATE MOVEMENT

Figures covering the production and exportation of Chilian nitrate for the month of April, 1919, and for the corresponding period of 1918 and which are fairly representative of the present condition of the nitrate market, show that in April, 1918, 5,099,754 quintals (about 102.41 pounds per quintal) were exported, whereas in April, 1919, only 738,786 quintals were shipped. Last April, according to these figures, 5,186,797 quintals were produced; this year's production amounted to only 3,670,362 quintals.

NATIONAL GRANGE ACTIVITIES

The Grange has struck twice and stands ready to strike as many times more as will avail anything at the Mondell Bill, which has been under consideration in the House Committee on Public Lands. This bill would authorize the appropriation of a half billion dollars in land reclamation, employment of soldiers (and others) in the work, and the sale, at cost of reclamation if possible, giving the soldiers and sailors first chance. It provides for colonization in communities. As a whole it is an unworkable, paternalistic, uneconomic scheme, designed to provide employment at government expense in the name and behind the screen of "doing something for the returned soldiers and sailors." We would like to do something for them, too; instead of charging them for reclaimed land at what it will cost Secretary Lane to reclaim it at present prices. There are so many great interests including land interests, cheap food advocates and even the Administration favoring this scheme that the chances of killing it are against great odds. Out of the contest there may come, however, a reasonable, workable plan of soldier settlement, and soldier rehabilitation.

If we must pay three or four times the pre-war price for potash of which ninety percent is for fertilizer use then farm crops grown by using potash must bring a price commensurate with this increase. This is the notice served by the Grange Representative, Mr. T. C. Atkeson, on the House Ways and Means Committee at a recent hearing on the Fordney Potash Licensing bill. This may be called the opening gun of the Grange fight for a tariff on farm products which will give agriculture as much protection as any other industry. The fight is right up in front of us. The Grange will need help from every farmer organization in the country.



Scrubs in a Scrub Herd

"Oh, my cows are just scrubs and I don't suppose they more than pay their keep. But I can't afford to change now."

How often we hear this statement among farmers who have a few cows and milk them from day to day just as they do the rest of their chores. Such a farmer may have good cows in that bunch, just as well as poor ones, but he don't know it.

It is a queer notion that some of us farmers have about cows. Many think that grade cows are poor ones and pure bred cows are good ones. That is, the grade cow can not be good and the pure bred cow can't be a poor one. It is the same old story of guessing about cows. We think our cows are not worth very much and that may easily be true but we do not know for sure. And cows are not the only thing we don't know about. There are other divisions of the farm which are losing money for us as well if we only know it.

I do not want to say that pure bred cows are good always. I favor them. I expect to always believe that way. But there are good scrub cows in many farm herds as well. The trouble is to find out about them.

Weighing Milk

The Babcock test will show which cows are paying, but at that mysterious word "Babcock" a lot of us get scared right away and think there is no use. No one but an expert can operate one of those complicated things and that is all there is to it! Now I want to tell how to find out about cows and not get badly mixed up in any complicated figuring.

In the first place, get some sort of a milk sheet. You can get them from the dairy department of your agricultural college, or you can rule up a sheet for yourself. Put it in the barn where you empty your milk pails. Then get a set of milk scales and find out just what each cow gives a day. Set down the number of pounds on the milk sheet. Do it every time you milk. It will be easy. I know, because I do it every day. You will never miss the time. In fact you will look forward to the end of the milking to see how much your cows are gaining or losing.

But you will say that you can't afford to buy milk scales. I know that you can afford to, but suppose you can not. I have seen farmers keep regular account of the milk and weigh on a set of butter scales. These cost less and are worth less of course, but they show up the cows' production and that is what you want.

The regular milk scales show the weight of the milk only, and automatically subtract the weight of the pail so there is no subtracting every time you weigh. But you can do this in your head after a little practice and get the same result. Likely the butter scales will show weights by ounces while the others will make it in tenths of a pound, but that is a little matter too in the course of a year.

Total up every month what each cow has produced. Be sure and do this because if you leave it until the end of the year you will have a big job on your hands and probably will let it slip along and put it off until it is not done at all. Very likely you can get your banker or your town merchant to do this adding for you on an adding machine and you will have a quick, accurate job. If he is a good farmer-banker, he will be glad to know that you are weighing your milk and will be glad to help.

The Babcock Test

But you say you can't test. It costs $10 or $12 to get a good testing outfit of fair size—say 6 or 8 bottle size—and that seems to be a pretty big outlay. I know that a man with a half dozen cows can not afford to be without this outfit, but we will say that he can. So every month, if possible, take a sample of milk from two milkings from each cow and send it to your state experiment station for a test. Number the samples plainly so you may know which cow produced which milk. Be sure to take the sample from more than one milking and mix it, because most cows vary from time to time and your test wouldn't be a fair one unless this is done. Do not send much milk. A 3-ounce bottle for a sample is plenty and saves postage.

In a few days your results will come back from your experiment station. Possibly your agricultural college will do this for you. Both of these are state institutions and are for the good of the farmer. He must use them if he wants to.

After you have added up your month's milk production, which we will suppose to be about 600 pounds per cow for a 30 day month—not a big lot of milk, but fair. Perhaps the cow is nearing drying up time and this is the reason. Anyway, the test says that one cow's milk contains 5 percent of butter fat. Five percent of 600 is 30 pounds of fat for the month. Now if the price has averaged 52 cents for the month you will find that that cow produced $15.60 for the month. Have a place on the milk sheet or on your account book for this amount, and put it there. Next month you will have another record. In a year you will have just what the cow has done. Similarly, you will have records of what each of your cows have done for the year.

You will wonder if certain cows ate more or less feed that they are supposed to. Weigh a bunch of hay that each eats, the ensilage, the chop feed or whatever it is, and estimate for the month. It will not be far from right and it may easily be just right if you are careful. You can not weigh every feed given to each cow. It is not necessary and not practical for the most of us. You can do this on the milk scale if you care to. They are handy in the barn and will be plenty big enough.

After you find out about the cows, then you may find that two or three of the herd are worth while, in fact they may be good cows, and perhaps three or four are losing money for

Dependability
of the
DE LAVAL

Now that "dog days" are with us, it is no time to bother with a balky cream separator.

Dependability in a cream separator is especially necessary in the summer when the milk should be taken care of in the shortest possible time.

The DE LAVAL Cream Separator is dependable, and with ordinary care it will easily last a lifetime.

The DE LAVAL capacity rating is dependable. Each size exceeds its advertised capacity under ordinary, and even under unfavorable, conditions.

DE LAVAL Service is dependable. Fifty thousand agents the world over see to it that DE LAVAL Separators are properly set up, operated and taken care of. And, above all, the De Laval Company is dependable—the oldest and by far the largest cream separator manufacturers in the world.

More DE LAVALS in use than of all other makes combined.

See the local De Laval agent, or, if you don't know him, write to the nearest De Laval office as below

THE DE LAVAL SEPARATOR CO.

165 Broadway
NEW YORK

29 East Madison Street
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61 Beale Street
SAN FRANCISCO

Get More Milk At Less Cost

Dairy authorities state that unless you supplement your pasturage this summer with a good grain feed, your milk production will fall off not only now but next winter when you cannot get pasturage. International Special Dairy Feed used with pasture will produce more milk at lower cost than any other feed on the market.

INTERNATIONAL SPECIAL DAIRY FEED
Makes Your Feed Bill Smaller — Your Milk Check Larger

Pasture is abundant now. Feed International Special Dairy Feed as a part ration. It will keep your cows in top notch milk producing form.

A. C. Palmer, one of Indiana's leading dairymen, in an article in a recent issue of Hoard's Dairyman, said "I believe the fault of pasturing all summer without supplementing feeds is one of the greatest sins of the dairyman, and the thing more than all others responsible for decreased milk and butterfat production." It is a fact that the greater part of the underfeeding by farmers with pasture comes during the summer months.

Guaranteed Ingredients-Guaranteed Results

International Special Dairy Feed is composed of scientifically blended grains, grain products, cottonseed meal, feeding molasses, etc. Every ingredient is guaranteed to be high quality. This is why it was the first feed ever guaranteed to make more milk.

Try a Ton Today

Nearly every leading feed dealer throughout the dairy sections handles International Special Dairy Feed. Go to your dealer and order a trial ton. Prove to yourself why we are able to guarantee its milk making qualities. The price for summer shipment is very reasonable. If there is no International Dealer near you, write us direct.

INTERNATIONAL SUGAR FEED CO.
Minneapolis, Minn.
Makers of Guaranteed Feeds
Live Salesmen Wanted

Why the Papec
Is the Easiest-Running Ensilage Cutter

THE PAPEC cutting wheel runs *only* 600 revolutions per minute—but little over one-half as fast as most other ensilage cutter wheels. And, of course, it takes much less power to drive a cutting wheel at 600 than 1000 revolutions per minute.

But why is it that the Papec cutting wheel needs to run *only* 600 revolutions per minute?

PAPEC
Ensilage Cutters

Correct relation between the *capacities* of the cutting wheel, the fans, the drum, and the elevating pipe—that's why the Papec cutting wheel needs to run *only* 600 r. p. m.; *why the Papec is the easiest running ensilage cutter.* From the time the corn goes on the feeding table until it is in the silo, it moves in a steady stream. Every one of the six fans *cleans clean* at each revolution.

This is the result of *right principles* and *right design*—in which Papec has led for many years, and because of which the Papec plant is today the largest factory in the world devoted exclusively to the manufacture of feed and ensilage cutters.

"*Own your own*" Papec this year. Write for our 1919 catalog. It shows how you can save $100 to $200 a year—how you can soon save enough to pay for a Papec. There are 4 sizes—a gas or kerosene engine developing as little as 3-h.p. operates the 10-inch cutter successfully.

PAPEC MACHINE COMPANY
178 Main Street, Shortsville, N. Y.
25 distributing points in the U. S.

Before You Buy Any Pipeless Heater Find Out About These Two

Monroe Tubular
None we can find out anything about, are made the particular high grade way this one is made. None other has a row of boiler heat tubes around the Combustion Chamber. None give so much heat from as little coal. It is Square Housed—a great advantage.

The Syracuse
Like the Monroe, the Syracuse also is Square Housed. That square housing has a lot to do with both being so economical. The Syracuse costs less than the Monroe, but it is in no sense cheaply made. It will give you good service, and is worth every cent it costs.

Send for catalog about both. Give us the name of your dealer, and if he does not now handle our products we will arrange with him to represent us

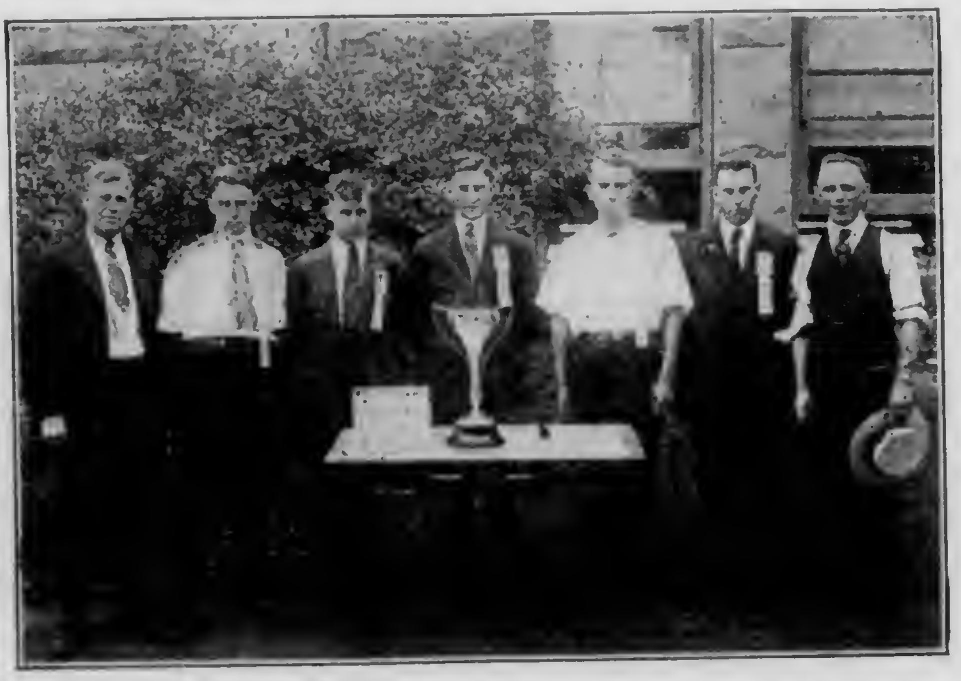
KELSEY HEATING COMPANY
234 JAMES STREET, SYRACUSE, N. Y.
Dealers Everywhere

you. Sell the losers as soon as you can find the right opportunity and keep the others. In time you will want a purebred herd, but these changes can not be made all at once by most of us. It is a case of years to get just what we want, but it should not be years to get rid of a poor cow, one that is losing money every day.—Earl Rogers, Ohio.

WINNING STOCK JUDGING TEAM

The accompanying illustration shows the Susquehanna Stock Judging Team which won the highest honors at the recent Farmers' Week at Pennsylvania State College. All of these boys realize the importance of getting started right in farming and each one now owns one or more pure bred Holstein heifers. All of these boys have also been winners in local Farm Bureau judging contests at the fairs. These boys are an important part of the great dairy development in Susquehanna County.

Today Susquehanna County is the greatest dairy county in Pennsylvania and in the near future it will become one of the greatest Holstein centers in the world. We have six cow testing associations in operation and we have 21 pure bred bulls owned in cooperative associations. The average price paid for these bulls is $1,000. There are more cooperative Bull Associations in Susquehanna County than in all the rest of Pennsylvania.—E.



Susquehanna County Stock Judging Team. Left to right:—B. H. Engle, County Agent; Frank Wilmarth; Kenneth McConnel; Miller Lewis; Rupert Grant; Howard Benning; S. H. Cummings, Vocational Instructor at Harford High School.

LEGUMES AND CEREAL CROPS FOR SILAGE

The wide use of the silo as a means of preserving corn for feeding purposes has aroused interest in the possibility and advisability of utilizing the same method as a means of preserving other forage crops. With some of these crops, especially those belonging to the sorghum family when the necessary conditions are observed, the results are practically as successful as with corn. For others, especially those of the legume family including clover, alfalfa, field peas, cowpeas and soybeans, the results have not been uniformly successful. In University of Missouri Bulletin 162, C. H. Eckles discusses these various crops for silage, and comes to these conclusions.

Under proper conditions, legume crops may be preserved in the silo with entire success, but as a rule they are best preserved as hay on account of the much greater weight to be handled if put into the silo and the lack of suitable machinery for handling the green crop in the field. When conditions make it advisable to put legumes in the silo, in addition to ordinary precautions concerning exclusion of air special attention is necessary that the proper amount of dry matter is present in the material.

For proper preservation in the silo, a dry matter content of approximately 40 percent gives the best results. Legume crops in the stage of maturity as cut for hay may contain as low as 20 to 25 percent of dry matter. If put into the silo under these conditions the silage will have an extremely disagreeable odor when removed and be almost worthless for feeding purposes. The wide variation in results from using legumes for silage as reported in agricultural literature is largely explained on the basis of the dry matter content of the materials used.

Sufficient dry matter to insure proper preservation may be assured by allowing the crop to reach a suitable stage of maturity before cutting, or in case the crop has not reached the stage of maturity necessary to insure the dry matter content desirable, by allowing the forage to lie in the field five to six hours after cutting before putting into the silo.

Alfalfa can not ordinarily be allowed to stand in the field until the proper stage of maturity is reached, and except in a season of drouth when the dry-matter content of the plant is abnormally high, it should be allowed to lie in the field four to six hours so that some of the surplus water can evaporate.

Canada peas and oats are in condition to go into the silo when a stage of maturity is reached where the pea pods are becoming yellow and the oat heads are showing the first indications of ripening.

Clover will contain the proper amount of dry matter if allowed to stand until somewhat more than one-half of the blossoms are brown.

Soybeans are in the proper stage of maturity for silage when the plant shows signs of approaching maturity. The beans should be well developed and the pods beginning to turn yellow.

Cowpeas should show the same conditions as described for soybeans. On account of the wide variation in condition and time of planting, it is often necessary to put cowpeas in the silo before the proper stage of maturity is reached. Under these conditions partial drying in the field is essential to good results. Silage from legumes is superior in protein content, but somewhat inferior to corn silage in total digestible nutrients. With a proper amount of dry matter present the loss of feeding value while in the silo is no greater with silage from legumes than with silage from corn.

Sudan grass is preserved readily in the silo with no special attention necessary to the amount of dry matter. Its feeding value will range from two-thirds to three-fourths that of good corn silage, depending upon the maturity of the crop when put into the silo.

Wheat is used to some extent for silage and supplies a silage of reasonably good quality, having a feeding value approximately the same as corn silage. It should be put into the silo when the wheat grains are in the dough stage. No special precautions are necessary to insure a proper preservation.

Rye may be preserved readily in the silo but the resulting silage is not very satisfactory on account of its not being palatable. For best results it should be put into the silo in the blossoming stage, or even earlier. In feeding value it is somewhat below that of corn silage.

LACK OF ICE A PROBLEM

On account of the lack of ice in many dairy sections, dairymen will be compelled to use scrupulous care in the production and handling of milk and cream this season. It will be necessary to adhere more closely than ever to the three C's in caring for milk—Keeping it Clean, Cold and Covered.

One of the most important factors in reducing the bacterial count in milk, and thus lengthen its keeping qualities, is the sterilization of utensils. Pails, strainers, separators, surface coolers, and shipping cans must be cleaned and sterilized, preferably by steam. Every farmer who can afford it should possess a steam boiler and sterilizer. If he feels that this is too great an expense, there are other sterilizers on the market, cheap but efficient, which will render milk utensils sterile. A satisfctaory home-made sterilizer has been developed by the Department of Agriculture, and can be made at a cost of about $10. Complete directions for making it may be obtained by addressing the department, at Washington, D. C. Such important factors as clean udder, milking with clean hands, keeping the stables clean, and the use of small-top pails will lower the bacterial count, and should be carefully observed by all milk producers.

In cooling milk dairymen should use facilities already existing, such as cold water in wells and springs. When milk is drawn from a cow it has a temperature of about 95 degrees F. In the North, well and spring water generally varies in temperature from 50 to 60 degrees F. By the use of surface coolers and a tank of cold running water, milk can quickly be cooled and held within two to four degrees of the temperature of the water. During warm weather it may be necessary to ship or deliver milk twice a day. This would have a tendency to check spoilage, especially of evening milk, which is usually more than 12 hours old when shipped. Milk dealers can do much to prevent spoilage by pasteurizing the milk. Pasteurization not only kills disease bacteria but reduces bacterial count and therefore delays spoilage.—Dept. Circular.

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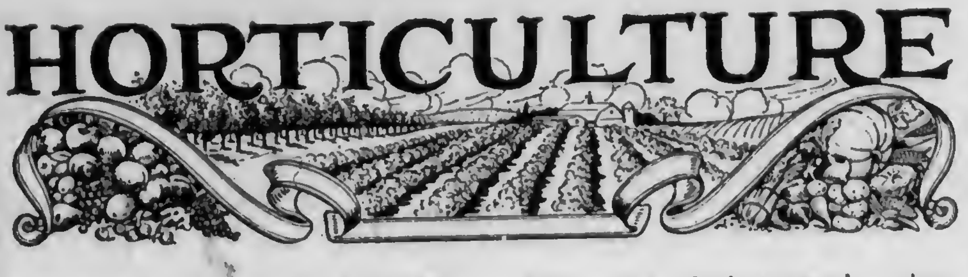


HORTICULTURE

MORE COOPERATION NEEDED

By J. P. STEWART.

In spite of much current opinion to the contrary,—especially in the cities,—the farmers of the country are not exceeding the speed limits in their rush toward wealth. On the other hand, we know of many good hard-working farmers who find, after balancing up their accounts over the last four years of high prices, that they "have not made a cent." Their receipts of course were higher, but their expenditures for labor, machinery, fertilizers, clothing and feeds have been so much greater than ever before, that in the end they have nothing but experience and a modest living to show for their efforts. The saddest part of it moreover is that the years just ahead, in which the prices of their products are expected to decline "in order to permit reductions elsewhere," are rather less hopeful than those just passed.

In this emergency numerous suggestions and partial solutions may be offered, but after all we wonder whether a considerable part of the difficulty is not attributable to the general policy of aloofness and the lack of any proper system of cooperation which obtains so generally among farmers. In fact, complete independence is one of the boons that is generally associated with the farming business. If this apparent independence is being maintained at too great a cost, however, and if it is really leading to financial dependence or ruin, is it not time that some of it was being surrendered? While organization and consolidation of all kinds are becoming the rule in practically all other kinds of business, is it any wonder that the average farmer, going it alone, is finding it increasingly difficult to make any important advance?

As a result of proper organization, the manufacturer, for example, is able to secure his raw materials at the lowest possible prices, to sell his finished products in the best possible markets by means of an efficient distributing system, to develop more economic methods of production and avoid costly mistakes. To these advantages his success is likely to be chiefly due. How many of them are available to the average, individual farmer, altho he also is essentially a manufacturer of one of the world's most important materials,—food.

From the fruit-grower's viewpoint, however, all of these advantages are readily obtainable in many localities of the East by a simple system of cooperation, for which the rules and legal regulations are already provided in detail. Such an organization moreover should be of special value to the smaller commercial growers, altho it should also be of very material assistance to the largest. Conspicuous examples of successful fruit-growers' organizations are already available in the West where their more difficult marketing conditions have driven them to it sooner. Why should the Easterners continue under the less efficient system simply because they are able to stand it?

The reasons must commonly given for the comparative absence of successful cooperative organizations in the East are the lack of dire necessity and the fact that "the people know each other too well." We doubt the validity of either reason, and suspect that in the very near future we shall have an abundance of examples to prove we are right. In fact the big success of The Eastern Shore of Virginia Produce Exchange, which has been in operation since 1900 and now does the second largest business of any cooperative organization in the country is probably sufficient evidence now. The recent cooperative packing associations that have sprung up in Western New York and elsewhere, and the success of the Florida Citrus Exchange may also be cited as favorable examples.

In addition to the advantages of cooperation mentioned above the following important benefits are obtainable; the development of standard grades and brands in sufficient quantities to affect the market, the avoidance of express or freight shipments in less than carlots, the advantages of collective bargaining in both the purchase of materials and sale of products, material reduction of the chances of rejection of shipments or of other chicanery at the other end, the advantage of a sales agent who is primarily interested in the producer in case of a dispute, intimate touch with all the leading markets of the country instead of being practically tied up to a single market as when one employs or consigns to a single distributor in some large city, and finally freedom from the worries and responsibilities of looking after the details of the marketing at a time when one is already rushed to the limit with the picking and packing and loading or storing.

In spite of this evident array of advantages in favor of proper organization and cooperation, the fact remains that the permanence and chances for ultimate success depend very largely on the personnel, both in the management and in the rank and file of the organization, and on the soundness and firmness of the contract under which they agree to come together. Whenever such organizations are formed it should be recognized that they will not all be clear sailing, and that much pressure is likely to be brought by the older individual agencies with a view to breaking them up and resuming their old grip on the farmer and fruit grower, both in his selling and buying.

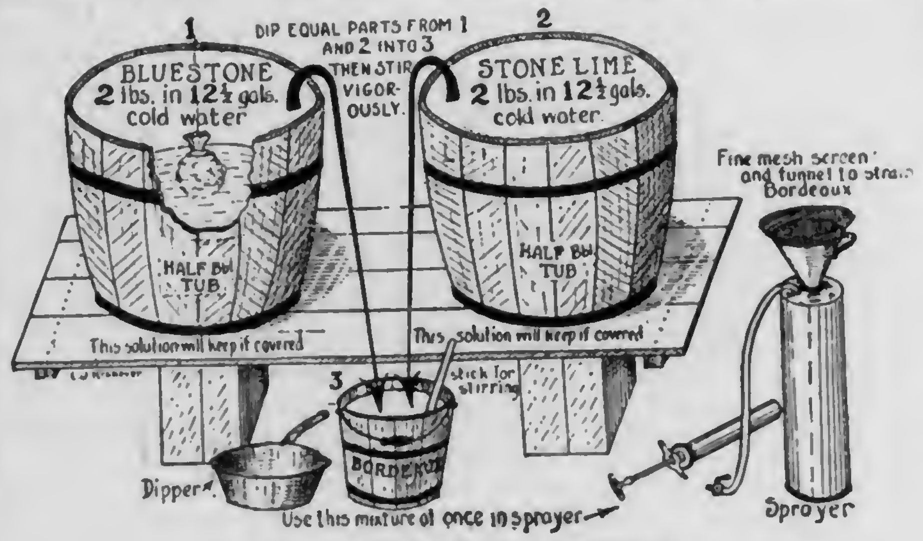
If it is good business, however, for manufacturers and other commercial interets to unite, in order to secure greater efficiency and to eliminate waste, why shoud the fruit-growers refrain from similar action to improve their business. Such action need not and in fact should not increase the present price to the ultimate consumer, but it should result in reducing production costs and in giving the producer a much larger share of the consumer's dollar.

The purchasing phase of the business is a much simpler matter than the selling as a rule, as the fruit-grower should be much more of a seller than a buyer, but the net effect may be nearly as important. The standardization of supplies, so as to secure the same make of implements or the same style of packages, and thus reduce both the original cost and the time and money needed to secure repairs or to maintain a reasonable stock, is an important possibility along this line. The purchase of supplies in carloads—such as fertilizers, spraying materials, packages, fuel and feed,—and securing them direct from the car is the most economical method of buying and will often effect a very important saving both in original outlay and in possible loss in rehandling. The purchase of all such materials in large quantities for cash instead of in small dribs on credit, as is now commonly done, by the smaller growers at any rate, is the most important factor in the saving. It, however, is evidently not available to any but the largest growers, if everyone goes it alone. It is essential that some definite cooperation be undertaken and that all members furnish cash or proper bank credit with each order. This should secure the maximum discount and also should insure that the goods will be removed from the car on time.

If a community does not feel able to maintain a full-fledged organization with a capable manager for both buying and selling, it is often possible to line up with some of the local dealers or other established agencies in such a way as to secure most of the benefits of cooperation and avoid some of the larger expense. In any event the merchants who have been extending credit and rendering other valuable services to the growers in the past should not be left out of consideration when the cooperative plan of buying is undertaken. The proper committee can explain the change in plan adopted by their members and get new bids for their total trade, without the credit and service features furnished in the past.

Experience has shown that the local dealers usually welcome such an arrangement and frequently make a very satisfactory rate to members on the goods which they are in a position to furnish. Similar arrangements should also be possible at least occasionally on the selling side, altho we know of but one definite instance of this sort.

As an example of the savings that are possible thru cooperative buying, we may cite the fact that one state association is reported to have assembled so many orders for spraying materials at one time that it secured a rate distinctly under that available to the local dealers. As a result, many of the latter joined the association in order to get the advantage of the lower rate on their own supplies. Under recent national legislation, however, it is doubtful whether the latter membership would be acceptable. But in any event, we believe that fruit-growers are overlooking a very important business resource, so long as they neglect to take advantage of the opportunities offered by proper cooperation.


1
2
3
DIP EQUAL PARTS FROM 1 AND 2 INTO 3 THEN STIR VIGOROUSLY.
BLUESTONE 2 lbs. in 12½ gals. cold water
STONE LIME 2 lbs. in 12½ gals. cold water
HALF BU TUB
HALF BU TUB
This solution will keep if covered
This solution will keep if covered
Fine mesh screen and funnel to strain Bordeaux
stick for stirring
BORDEAUX
Dipper
Use this mixture at once in sprayer
Sprayer

How to Make Bordeaux Mixture

HOW TO MAKE BORDEAUX FOR SMALL ACREAGES

(1) Saw a 50-gallon barrel (vinegar or oil) and make two 25-gallon tubs.

(2) Put 2 pounds of Bluestone (called also Blue Vitriol or copper sulphate) in a cloth sack and hang over night in one-half a tub of water (12½ gallons). Bluestone dissolves slowly. Hang it the night before so that the sack is just under the surface of the water.

(3) Make a lime paste by slaking 2 pounds of fresh stone lime in one-half pail of water. Stir this into the half tub (12½ gallons) of cold water. Hydrated lime (comes in sacks) will do but is not so good. Use 2½ to 3 pounds of hydrated if stone lime cannot be had. Then follow directions of the picture. This method makes 25 gallons of spray.

TIMELY TRUCK NOTES

By R. W. DeBAUN

Early Tomatoes Bring High Prices

The early tomato crop is in a miserable condition in many sections especially South of Philadelphia. The severe drought came just when the vines were struggling to develop their fruits. This means that the yield must necessarily be light and that the vines will not hold up and continue to produce over a long picking season. Reports have just come to me that early tomato growers were selling their blushed fruits for $5.25 per basket early in July. This, of course, was to be expected because the growers had practically none to sell. City people should realize that the prices paid to the farmer are high when he has little or none to sell and little or nothing when he has an abundant supply.

Potato Vines Shade Soil

The best potato growers have learned that, as a rule, the largest yields per acre are obtained when the rows of Cobblers are from 30 to 34 inches apart instead of from 3½ to 4 feet. Not only is the yield per acre increased but in many cases the closer rows outyield those further apart. The reason offered is that the vines shade the ground and keep it cooler where the rows are closer. At this season of the year it may be well for the growers to study their growing crop to see the thing for themselves.

Disease Injures Garden Peas

Peas for the cannery and for market were severely injured this season by a disease known as the pea root rot. The disease has been bothersome along the Delaware River in New Jersey for several seasons but this year it was especially destructive in Delaware and Maryland. It was not severe where peas had been grown on the same piece of ground for two, three or more years in succession. Therefore, it becomes advisable to plant where peas have not grown for a few years as far as circumstances will permit.

As the disease takes possession of a growing crop the vines, leaves and pods generally show numerous lesions and streaks which occur near the soil line, while in most cases the roots, with the exception of the tap root, are entirely rotted away. Just when the crop is expected to develop, the infected vines turn yellow, then dry and brown and finally the dead plant drops off. Wherever the disease is known to be present it is essential to rotate.

Quick-Acting Fertilizer For Side Dressing

It frequently happens that it becomes advisable to apply a side dressing of fertilizer to help a growing crop to develop properly. If best results are to be had from the fertilizer used it is necessary to have a mixture which is made up of quick acting materials. It just happens that two of our commonest fertilizer ingredients are the most economical and quickest to act. They are nitrate of soda (18 percent ammonia) and acid phosphate (16 percent phosphoric acid). When mixed in the proportions of one and three by weight it gives a fertilizer which analizes 4½ percent of ammonia and 12 percent phosphoric acid. One thing must be remembered: The mixture will become lumpy unless it is applied at once.

The plant food contained in a mixture of nitrate of soda and acid phosphate dissolves in the soil moisture just as sugar dissolves in water. Therefore, the growing crop gets immediate aid so that the yield is wonderfully increased. If an ordinary ready-mixed fertilizer is used as a side dressing for tomatoes, corn, cabbage, eggplants etc., it may contain much of its plant food in slowly available materials such as garbage, tankage, bone, leather filings, etc. Therefore, the growing crop would finish its development before it could make use of the plant food in the fertilizers used as a side dressing.

Farm Homes Look to be Neglected

As I rode thru familiar sections on the Fourth of July I was struck by the neglected condition prevailing around many farmers homes. Everywhere one could see weeds, grass and briars flourishing where the ground should have been kept clean. Broken baskets, old barrels, delapidated wagons, weedy hotbeds and scattered wood piles were especially conspicuous in the vegetable farms. Very few buildings had been repaired or painted during the last three years. Most of this neglect is due to the very high cost of new materials and due to the scarcity of labor. However, if some one calls our attention to the unsightly objects which we have become accustomed to, we may find time to burn up the rubbish which lays around the buildings and to trim up with the scythe and pruning shears.

The Right Fertilizer for Wheat

ARMOUR FERTILIZER WORKS
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Armour's CEREAL SPECIAL No 4 FERTILIZER
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For Sandy Soil
For Loam Soil
For Clay Soil
For Heavy Clay Soil

Which Suits Your Soil?

ONE of these four Special Wheat formulas supplies just the plant food that wheat needs and what your soil lacks. They are prepared especially for wheat from the best materials—they fill every wheat need—available ammonia to give the young plants a quick start and a good root growth before Winter; available phosphoric acid and potash to stiffen the straw, fill out the grain, make it plump and heavy and ripen the crop early.

Armour's Cereal Special Fertilizers

On sandy soil—use Armour's Cereal Special Fertilizer No. 1—2-10-6.
On loam soil—use Armour's Cereal Special Fertilizer No. 2—2-10-4.
On clay soil — use Armour's Cereal Special Fertilizer No. 3—2-12-2
If you have a heavy clay soil which you know can supply the necessary potash use Armour's Cereal Special Fertilizer No. 4—2-12-0.

grow more wheat per acre and cut the cost of production per bushel by supplying the right balance of plant food.

See our local sales agent NOW — ask him for a copy of our new Wheat Booklet—"Turning Fertilizer Dollars into Wheat Dollars". Don't delay—wheat seeding time will soon be here.

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Here is a modern building principle applied to silo construction. You've seen it used in bridges, trestles, steel towers and other forms of construction requiring great strength. Just look at the above picture, it tells the story. It's easy to see how these cross-trusses make the *Saginaw Liberty Silo* so rigid that no anchoring cables are necessary. Here are the other vital features of the *Saginaw Liberty Silo:*

Hollow wall—made of wood.
Perfect silage fermentation next to such a wall.
Dead air space between wood walls.
Silage protected against freezing.
No silo wall equals the smoothness of this wall.
Silage packs of its own weight.
Easy and simple to erect—a rigid, solid, immovable structure.

Write us for authentic silo information.

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Stationary, Portable or Saw-Rig—all at greatly reduced prices. Best Engine—longest record—strongest guarantee. Choose your own terms. No cut in quality, but a big cut in price for quick action. Write for new cut-price catalog—FREE, postpaid—ED. H. WITTE, Pres.

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POULTRY

EGG SELLING EXPERIENCES

In selling eggs for hatching we have found that the parcel post is a satisfactory method of distribution. We have tried several kinds of hatching egg containers and the prices range about $1.50 to $1.75 per dozen for the 15 egg size; $2.10 to $2.75 per dozen for the 30 egg size and $3.50 per dozen for the 50 egg size. When shipping an order of 100 eggs, two of the 50 egg boxes are more easily handled than a larger package.

The cost of mailing these parcel post egg packages in the first zone has been .08 for the 15 egg box, 10 for the 30 and .14 for the 50 egg size. The cost of the egg box plus the parcel post charge and the market value of the eggs gives the breeder a basis for deciding on the price he can charge for hatching eggs. We have found that farmers who wish to improve their flocks or buy foundation stock for pure bred flocks are willing to pay $2. per 15, $5 per 50 or $10 per 100 and we consider that good eggs from pure bred stock are worth that amount. The trouble of packing the eggs and handling the correspondence is well paid for by the profit that can be made at such a price if there are a large number of orders from a small amount of advertising. This year the demand for hatching eggs has been very good and many breeders have been able to sell their entire output of eggs for hatching from a three or four line advertisement in a farm journal circulating in their territory.

When hatching eggs are shipped by express they can be sealed with the bands of gummed paper furnished by the makers of the packages. Parcel post packages must not be sealed but they can be tied with a strong string. The only danger of an unsealed package is the small chance that some of the eggs might be removed and others substituted. However, we have never had this occur to our knowledge and do not believe that there is any risk by shipping eggs unsealed in a parcel post package.

When an order for eggs is received it pays to send the buyer a card acknowledging the order with the approximate time that the eggs will be shipped. When the eggs are shipped, another card should be mailed so the buyer will know they are on the way and be prepared to care for them at once. Delay in shipping eggs is one cause of losses and many eggs will be saved when buyers are notified so they can obtain their order the minute it arrives at the home station. In cold weather the eggs may become chilled, or be placed near hot steam pipes in a waiting room. When they become overheated, and then chilled again on the way to the farm, the chances for a successful hatch are very small. During hot weather the eggs are easily overheated. It only takes 103 degrees to hatch eggs and during May and June there may be many days that are hot enough to start the growth of the germ.

It pays to make the shipments of hatching eggs as promptly as possible so that the buyer will receive fresh stock. We do not believe in advertising so extensively that the orders will stack up and compel customers to wait several weeks for their eggs. It is best to carefully study the amount of publicity necessary to properly handle the output of eggs during the hatching season and then try and fill all orders within two weeks after they are received or more promptly if possible. A customer appreciates receiving his order promptly and such service often brings repeat orders the same season. If customers could arrange to place their orders a month or two in advance they would be practically sure of obtaining eggs for hatching on the exact day they were needed. A breeder of pure bred poultry is then able to estimate his business and give his customers better service. During April a farmer may wish 100 eggs for his incubator. If he orders them on March first for April first delivery, he is more likely to receive the eggs promptly. If he orders them on March 28th with instructions to ship immediately he may be disappointed and find that other customers are ahead of him and the entire number of eggs for sale until April 15th, or later, have been booked.

Loading Eggs at a Roadside Station

Promptness in answering correspondence is profitable for the breeder. When a buyer wishes eggs for hatching he has become interested in poultry improvement at least for the time and if his interest is stimulated at once by a prompt reply an order may follow. The type of the letter written by an inquirer is often not an indication of his ability to buy eggs of quality. A breeder received a post card one day that was home manufactured from a piece of a shoe box. The spelling was not all right. But, a prompt answer brought a good sized order within two or three days. It pays to treat every customer with the best consideration. Every one is a possible friend and steady customer for the future.

Enough advertising should be used to sell all of the quality eggs suitable for hatching. An advertisement can be run in a farm journal thruout the hatching season. This may care for all the eggs that the breeder has for sale. If orders begin to slacken it pays to place an "ad" in the local paper and possibly clean out any surplus that may accumulate. Of course, a large breeder will use the poultry journals extensively but this article is written for the farmer with large flocks of pure bred poultry who is specializing in the market end of the business but also has stock good enough to do a large amount of hatching—egg business every spring. The professional breeders usually advertise extensively thruout the country but the farmer—poultryman can do very well by specializing in the trade in his own state. As business increases it is possible to make many new customers and increase the advertising expenditures as the amount of stock and eggs for sale makes it feasible.

Advertising helps to build a business by finding the buyers who will not only buy once but send repeat orders both in the same season and during succeeding years. The value of the repeat order business with poultryman is so important that all correspondence should be preserved in files where it can be obtained for reference at any time. Keep an address book of all the customers who have purchased stock or eggs and send them any circulars or advertising that is published in the future in which they may be interested. If they have been satisfied with their previous purchases they will be very apt to come back for more eggs for hatching in future years when they wish to obtain more good blood for their flocks.—R. G. K.

BEING A POULTRY PROFITEER

In these days, when most poultrymen are engaged in swapping dollars—and not always getting a "new one for an old"—the problem of carrying on the business at a profit becomes a serious one. The dairymen have been successful in organizing and getting better prices for their products, but the poultrymen are not in a position to do this. The eggs produced by farm flocks, which reach the consumer thru the medium of the country storekeeper, the commission man and the city grocer, are placed in competition with the fresh-laid product of the poultryman who devotes his time to this line, and as a result the fresh laid eggs must be sold at the price the farm-laid eggs bring. In many instances, the latter are from a week to 10 days old when they reach the consumer.

The other day the wife of a prosperous contractor stopped at my stall in the Reading market and appeared to be highly indignant when I asked 52 cents a dozen for fresh-laid eggs.

"Why, the idea!" she exclaimed "It's an outrage to ask so much for eggs in the summer time. They're not worth a cent more than 30 cents at this time of the year, when the hens get all the grass they want and

you don't have to feed them. You farmers ought to be rolling in wealth."

And she walked away without purchasing any. This woman uttered no word of protest when the price of gasoline jumped from 11 cents to the neighborhood of 30 cents. Her husband's automobile cost more than my entire equipment, and he pays a chauffeur $30 a week for running his car without saying all sorts of mean things about having to pay so much money for a hired man.

The poultry business at the present time reminds me of a horseman who followed the country fairs in Maryland when I was a youth. Asked about his success on the track, he said: "It's a great life—if you don't weaken." A slackening up of egg production at this time, with no decrease in the expenses of running the plant, causes many of us to weaken. With the high price of feed, and with labor as scarce as at my time during the war period, there are few poultrymen who are doing more than breaking even, and at that throwing in free a lot of their own labor that might be sold to good advantage elsewhere.

I intend to cull my flocks closer this fall than at any time since I became a "hen enthusiast." Eggs will no doubt be high next winter, but so will be the prices of feed. There does not appear to be any relief in sight from soaring feed prices, altho the government has placed a fixed figure on wheat. If it would only place a standard price on eggs and poultry products that would net the poultryman "cost plus 10 percent" there would be some inducement for us to stay in the poultry business. Under present conditions many of us would be only too glad to get out if we could get back the money we have invested in the enterprise.

In my younger days I worked for a man who ran a country weekly on the Eastern Shore of Maryland, and who had a local reputation as a humorist. One day a woman came in and told him of a Plymouth Rock hen which her husband had killed for Sunday's dinner, and in which he found a $1 gold piece. The editor wrote it up and concluded with the remark: "We always said there was money in hens." After many years at the poultry game, I agree with him. There is money in poultry, many good, hard-earned dollars that we will never get out of the business.—A. J. Bradley.

What is the experience of other poultry raisers and egg producers at this time?—Editors.

DIP THE CHICK

Dipping chickens is likely to become more general than dipping cattle, because the chicken louse is a more widely-distributed insect than the cattle tick. The "dip" consists of 1 ounce of sodium fluoride to the gallon of water, which should be at a temperature of 70 to 85 degrees. The dipping should be done on a clear, warm day—never on a cold day. The old way of getting rid of chicken lice was by dusting with dry sodium fluoride. It was effective, but in the case of large flocks it was slow and wasteful, a great deal of the dusting material being inevitably lost.

Experiments in dipping promise a sure and speedy means of getting rid of one of the worst pests of poultry.

Even the BEST tire will not give the service it should give if used on BAD roads. Why not put these wasted tire dollars into PERMANENT GOOD ROADS?

Mohawk Mileage Built *in* by Hand

There's a big difference between any hand-made article and any machine-made product.

And there's just that difference between Mohawk tires and other tires.

Mohawks are *hand-made* by the highest priced tire builders in the industry.

The *good* tire today comes from the best material and best workmanship—not from secret methods or special processes.

***Actual* Value Makes the Tire**

The ability to put only *pure* material in a tire—omitting all the "fillers" such as barytes, clay, glue, whiting, lead oxide, reclaimed rubber, rosin. The ability to use an extra ply of *standard weight fabric*—to use *hand* methods only and to pay for the higher priced workmen necessary in *hand* building. These are the things that mean more *actual* value in a tire.

And it is *actual* value that gives better *actual* mileage.

Mohawks are made, either Cord or Fabric, in ribbed and non-skid treads and there's a special Ford size, hand made with an extra ply, too.

Good Dealers Everywhere Handle Them

MOHAWK RUBBER COMPANY
AKRON, OHIO

123 W. 68th St., New York City

The PERFECT CORN HARVESTER
Sold Direct $20.50 *JUST the THING for SHOCK or SILO CUTTING*

Works in any kind of soil. Cuts stalks, does not pull like other cutters. **Absolutely no danger.**

Cuts Four to Seven Acres a Day
with 1 man and 1 horse. Here is what one farmer says:

Gentlemen:—I cut corn with the Perfect Corn Harvester, used it myself and thought it a success to fill the silo. Yours truly,

ELI S. MANN, Washington Boro, Pa.

SOLD DIRECT TO THE FARMER
Send for booklet and circulars telling all about this labor-saving machine; also testimonials of many users.
LOVE MANUFACTURING COMPANY
Dept. 27 Lincoln, Ill.

VEGETABLE PLANTS
All kinds grown from selected seed. Will send by Parcel Post C. O. D. postage if desired
Cabbage Plants a specialty, leading varieties, 40c per 100; $1, 500; $1.50, 1,000; lots of 5,000 or more, $1.25 per 1,000. CAULIFLOWER, 60c per 100; $1.75, 500; $3, 1,000. CELERY, 50c per 100; $1.50, 500; $2.50, 1,000. Tomato, Pepper and Sweet Potatoes. Send for catalog giving prices. C. E. FIELD, SEWELL, N. J.

STRAWBERRY PLANTS
For August and Fall planting. Runner and pot-grown plants that will bear fruit next summer. Raspberry, Blackberry, Gooseberry, Currant, Grape Plants, Fruit Trees, Shrubs. HARRY A. SQUIRES, GOOD GROUND, N. Y.

WESTERN CANADA
Farm Lands at Low Prices
The Wheat Belt of America

Stock Raising in Western Canada
is as profitable as Grain Growing

In Western Canada Grain Growing is a profit maker. Raising Cattle, Sheep and Hogs brings certain success. It's easy to prosper where you can raise 20 to 45 bu. of wheat to the acre and buy on easy terms.

Land at $15 to $30 Per Acre
—Good Grazing Land at Much Less.

Railway and Land Co's. are offering unusual inducements to home-seekers to settle in Western Canada and enjoy her prosperity. Loans made for the purchase of stock or other farming requirements can be had at low interest.

The Governments of the Dominion and Provinces of Manitoba, Saskatchewan and Alberta extend every encouragement to the farmer and ranchman.

You can obtain excellent land at low prices on easy terms, and get high prices for your grain, cattle, sheep and hogs—low taxes (none on improvements), good markets and shipping facilities, free schools, churches, splendid climate and sure crops.

For illustrated literature, maps, description of lands for sale in Manitoba, Saskatchewan and Alberta, reduced railroad rates, etc., apply to Superintendent of Immigration, Ottawa, Canada, or

F. A. HARRISON, 200 N. 2nd St., Harrisburg, Pa.
Canadian Government Agent

A Midsummer Hat

I had such good success with making over my old hats this spring, that I felt very confident, when I needed a mid-summer hat, that I could make one that would suit me just as well as a hat purchased at a milliners for much more money.

To begin with, I had an old wire hat frame, rather small crown, but fitting my head comfortably. It had a perfectly round brim not more than medium width, but was made of many more wires than they put into the new sheer hats. Wires add nothing to the attractiveness of a sheer hat, and I found that I could very well dispense with every other wire, and also do away with the wire extending around the brim between the outer, or edge wire, and the one extending around the head at the base of the crown. Some pliers cut the wires, and pinchers pinched the rough ends together and smoothed up rough edges left from my amateur wire "cobbling."

The hat that I particularly desired to copy was much wider directly in front than this frame. But after the middle wire of the brim was taken out, it was very easy to pull the front out wider, wire it in place, twisting the wires around each other where necessary, and pinching down the sharp ends. This entirely changed the shape of my hat, and made it very much like the one I had seen in the city, and liked so well.

I bought 8 yards of wide horsehair braid, sheer and very plain, having just the tiniest edging, hardly perceptible when sewed onto the frame. I also bought a small bunch of very shiny black cherries. (The coveted hat had been so trimmed.) All the rest of my trimmings were in the house, bits from other-day hats.

First thing after getting the shape of the frame to suit me, I covered it with pieces of black maline. Wherever these crossed, or overlapped each other, the material was so thin it did not show. In fact, it was merely put on the frame to give body to the horsehair braid. I made the crown of the braid, just gathering the edges at one end of the braid to shirr into a nearly round, flat rosette, for the start. Around and around this, I sewed rows of braid, not cutting them off, but just pulling the braid very gently, or fulling it, not noticably, as was needed, until I had a very large crown, intending to give it a draped appearance when on the hat.

As Light As Air

Next, I covered the inside and outside of the crown smoothly with the braid, but saved 1½ yards of it, by using in its place some black maline quilling. I let the edge of this pleated maline come over the edge of the crown just about ⅓ and this makes a most dainty edging, and "expensifies" the effect much more than would an all-braid covering. The stitches used in covering the brim were long on the inside of the braid, and very short wherever they would show. The horsehair braid is very flexible and very easily manipulated.

Electric Washer Run by Farm Lighting Plant

After my brim was completed, I fastened the crown down lightly here and there, and then draped it about the frame crown. After that I made a crown lining of some of the old lace once covering the frame, fastened it in, shirred it up loosely at the top. As one looks thru the hat, which one may easily do, it is so sheer, one sees the pretty pattern of the lace.

My trimming turned out to be much more expensive-looking than just the little bunch of jet black cherries I had first intended using. I unfastened the top layer from my long, wide, black ostrich plume, pushed the base of the plume into a goose quill, and, as said goose was a white bird, I dipped the quill end into jet black colorite left from blacking one of my spring hats. I then gave the quill part of my feather a coating of colorite, as it was looking a bit dull, and—well, I just certainly have a beautiful hat. The cherries were placed at the base of the plume, which plume falls over the crown in just the prettiest manner, taking the shape quite naturally, and looks rich as a regular full plume, but not weighty as a full plume would be. In fact, my midsummer hat is as light nearly as air, fits me just right because of the small crown inside the big draped one, and between a goose and an ostrich, I have a beautiful hat for less than $4. The hat I had admired so much was $13, and it had no plume nor maline pleating, and no lace crown lining. I should suppose my hat is well worth $15 and probably more.

I have a touch of black in all of my new summer dresses. With a white one I wear a long string of jet beads, a medium dark voil is old-rose, gray and black, with black lawn pipings and a black tassel on the sash end, while my very best one is of sand-colored bastiste, and has trimming bands of pink and sand-colored taffeta. This has black braiding on the front of the belt, and a black stole of crepe-meteor, both ends tipped with black tassels. I wear black pumps with hose to match each dress in color and my summer finery looks fresh much longer than lighter colored would.—The Make-Over Lady, Broome Co., N. Y.

FLOWERS FOR THE RESTAURANT

And Money For Your Pocket

Seated at a dainty table in the restaurant of an exclusive store I looked about and feasted, until more sustaining food arrived, on the beauty and elegance of the furnishings. Finally I brought my eyes to my own table. The flowers in the graceful holder were far from fresh and failed to enrapture the beholder, which they were probably intended to do. I ate my luncheon thoughtfully, and then sought out the charming Madam-in-Charge.

"Everything but one is as it should be," I said. "The linen is immaculate, the silver and glass are irreproachable; the service all that can be desired. May I mention that one thing?"

"I would like to hear it," she answered pleasantly.

Then we launched into a talk about flowers, their arrangement, their added charm to the well-appointed table, and I was commissioned to bring from my old-fashioned garden certain flowers, and I was especially begged to go into the fields and woods for wild ones. As if the latter were not always a mad revel for me!

It seemed that Madame-in-Charge had the greatest difficulty in obtaining blossoms and leaves. She would be delighted to have a dependable source of supply.

And so next day I proudly laid in a suit-case daffodils and narcissus, being careful to add a generous supply of slender blade-like leaves. I carried them to the restaurant. Gracefully arranged in slender brown vases and low bowls, they brought the charm of spring into that lunch room, and the guests chanted words of praise.

Later the opening buds of certain varieties of peonies, the red ones that bloom earliest, and those of palest pink that resemble so closely the water lily, were used effectively. Oh, yes—before these came, fragrant arbutus, that short stemmed gem-of-the-woods, had been gathered in quantities and placed in low dishes, delighting those who lunched or dined.

Madame-in-Charge was content. I also was content. The flowers were gathered carefully, packed sensibly and carried only four miles by motor car. They were always fresh. Whether they blossomed in garden or woods, I was paid $2 a "suit-case." They were furnished three times a week.

Saxafragia Canadensis, spring beauties, meadow bluets and wild violets made very "Frenchy" centerpieces, and each was a personal message from spring.

Rockets made a clear, grandmotherly change. Then lilies-of-the-valley and roses. Daisies, those golden-hearted ladies that nod in such numbers in our fields if we farmers are not watchful, were very popular and, combined with the flaunting yellow of their "ox-eyed" sisters, proved very artistic.

Snapdragons, calendula, California pinks, asters, dahlias, cosmos and chrysanthemums, all were used in turn, with pleasant "between times" of wild flowers.

At length I told Madame-in-Charge that Jack Frost had paid a "raffles" visit to my garden and had stolen all of my treasures. "Go into the woods," she begged, "and find bright leaves and berries." I went.

I managed until nearly Christmas, tho sometimes pressed sorely, to supply the lady regularly with something fresh and attractive for those precious tables. Mind you, I made some very good money, but supposing I had never suggested my services to Madame-in-Charge!—Mrs. Elizabeth O. Jean, Baltimore Co., Md.

SANITARY FLOORS

We have arrived at the stage in civilization where we want everything else sanitary, so why not floors? The physician tells us that dust and dirt are prolific sources of disease. Cracks in floors, while being unsightly in appearance, harbor an unbelievable quantity of dirt.

A new floor, if properly laid, is free from this disagreeable feature, but in the course of time, theso cracks will begin to appear, due to the shrinkage of the wood. For this

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identical condition paint manufacturers make and sell a specialty known as "crack filler." If all floor cracks are filled with this material, the accummulation of dust and dirt will not be in evidence. Thus you may be assured of a sanitary floor surface and sickness may be avoided.

It is a simple matter to remedy; just clean out the dust and dirt from the cracks with some sharp pointed instrument and then thoroly clean out with a scrubbing brush, soap and water. When dry, the crack filler may be applied. It is made in stiff paste form and should be applied with a putty knife in much the same manner as putty. To make the job complete the floor should then be waxed, varnished or painted, depending, of course, on the present finish and the effect desired.

CANNING COMPOUNDS UNSAFE

Intelligence, cleanliness and care are better preservatives of fruit and vegetables than any of the so-called canning compounds which are on the market, and which the housewife should be most wary of. Some may think that the amount of preservative used is so small that no harmful effects can result, but the home economics workers at the New York College of Agriculture think that this practice cannot be carried on continuously and extensively with impunity.

Foods spoil because of the action of bacteria, or "bugs," as they are frequently termed. Proper canning methods give the housewife adequate means for destroying or restraining the growth of bacteria. Chemical preservatives take their power from their poisonous effect upon the bacteria. It is fair to assume that the cells of the human body are as easily injured as the bacteria. What is more, if canning and preserving is properly done, there is no need of using preservatives.

APRON FASHIONS

Aprons being brought home to American women by their soldier friends from France are making afternoon apron wearing popular. Afternoon aprons are shown in organdie and dotted Swiss. One of organdie, with collar and cuffs to attach, is made perfectly plain and finished with scalloped edges and appliqued hem of the material. Many of the fancy aprons have bibs attached, or a piece representing a collar.

One popular fancy apron is a small white sewing apron embroidered in voilets in colored floss and edged with silk fringe. Others are made of ecru laces and embroidery stitched together in elaborate mosaic patterns.

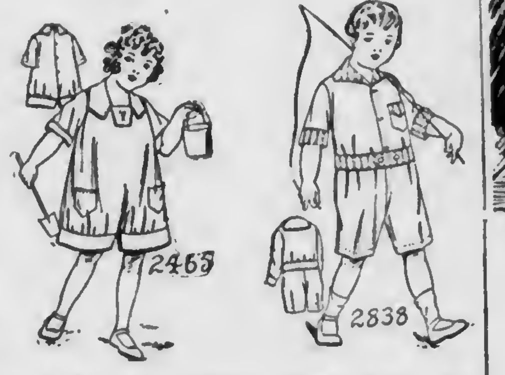
The "Hoover aprons," made so well known by the food demonstrators, are also used for house dresses. They are very practical, as they can easily be laundered, having so little fullness and no fancy decoration.

Gingham is doubtless selling now as low as it will be possible to get it for some time, for when wholesalers have to renew their stocks prices will be higher, reaching the retailer by fall, so it is wise for housewives to get their apron ginghams now. Fairly good popular grades are selling for 12½ to 15 cents.—Esther Cosse, Passaic Co., N. J.

That old faded sweater, moth eaten perhaps, can be made to do service again. Dye it, ravel out the yarn, and reknit it.

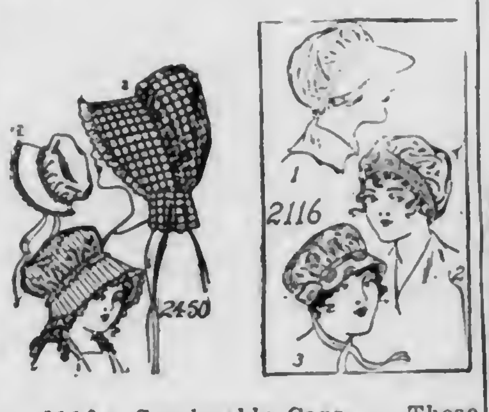
PENNSYLVANIA FARMER PATTERNS

2465.—Comfortable Garment For Little Ones.—Galatea, gingham, chambray, percale, linen, drill, Indian head, khaki, gabardine or flannelette are serviceable materials for this design. The fulness of the leg portions is gathered to wide bands. The garment is loose-fitting and will make an ideal play dress. The pattern is cut in 5 sizes: 1, 2, 3, 4 and 5 years. Size 4 will require 2⅝ yards of 36-inch material. Pattern, 10 cents.



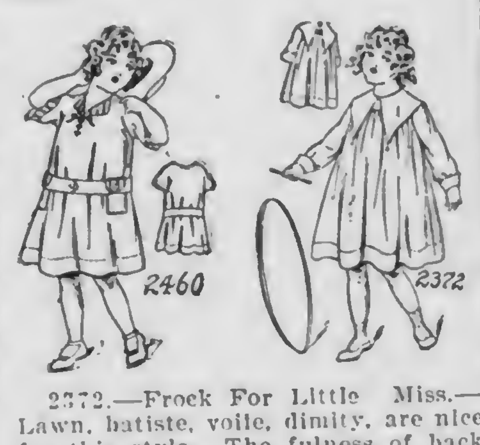
2838.—A Natty Play Suit for Small Boy.—Here is just the model for romping and outdoor wear. It is good for linen, gingham, linen, drill, pique, seersucker, and khaki. Pattern is cut in 4 sizes: 3, 4, 5 and 6 years. Size 4 requires 2¼ yards of 36-inch material. Pattern, 10 cts.

2450.—Cool Summer Bonnets.—These models may be developed in gingham, chambray, percale, lawn, linene or linen. No. 1 shows a Tam o' Shanter style, with ruffle finished crown. No. 2 is an "old-fashioned," popular style. Both designs are sure to please and will prove effective sun shades. The pattern, including both styles, is cut in one size, Medium, for ladies and for girls. It requires for No. 1, 1¼ yard, and for No. 2, 1⅞ yard of 32-inch material. Pattern, 10 cents.



2116.—Serviceable Caps. — These models are nice for silk, satin, poplin, cravenette and other rubberized cloth. They are ideal for motoring and travelling. The pattern includes the three styles portrayed. It is cut in 2 sizes: Medium and large. No. 1 will require 1 yard, No. 2 will require ⅞ yard, No. 3 will require ⅞ yard of 27-inch material for the Medium size. Pattern, 10 cents.

2460.—A Cool Play Dress.—Good for repp, pique, linen, gingham, chambray, percale, galatea, Indian Head, drill or cotton corduroy. The dress is closed with eyelets and lacing at the center front, and is slipped over the head when worn. Pattern comes in 4 sizes: 2, 4, 6 and 8 years. Size 4 requires 2¼ yards of 36-inch material. Pattern costs 10 cents.



2372.—Frock For Little Miss.—Lawn, batiste, voile, dimity, are nice for this style. The fulness of back and front is gathered to yoke portions. The sleeve may be in wrist length, or shorter, as in the back view. The pattern is cut in four sizes: 2, 4, 6 and 8 years. Size 6 requires 3¼ yards of 36-inch material. Pattern costs 10 cents.

No Wonder He Grins—and She Smiles

THEY can now spend long delightful evenings in a brilliantly lighted home—that was once dark and cheerless. There are no more lamps to fill—not for her.

Their tasty appetizing meals are cooked in a jiffy on a modern gas stove, and the gas can be shut off as soon as the cooking is done. By a mere turn of the wrist the barn is flooded with light for the "chores".

Hundreds of thousands of farmers have proved to their entire satisfaction that the

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gives more and better service at less cost than any lighting plant on the market. Write us for the names and addresses of neighbors who have used a Colt plant for years.

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Not only will Moline Grain Drills increase your yield and save seed for you, but they will give you a lifetime of good service. Steel is used largely in their construction and a straight line of draft direct from the furrow openers to the horses' harness gives light draft.

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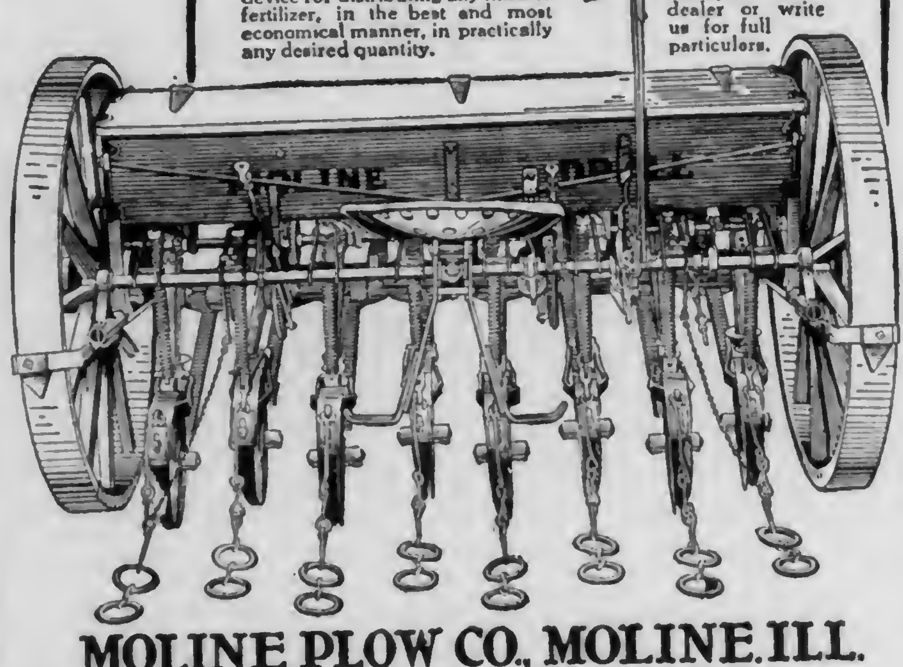

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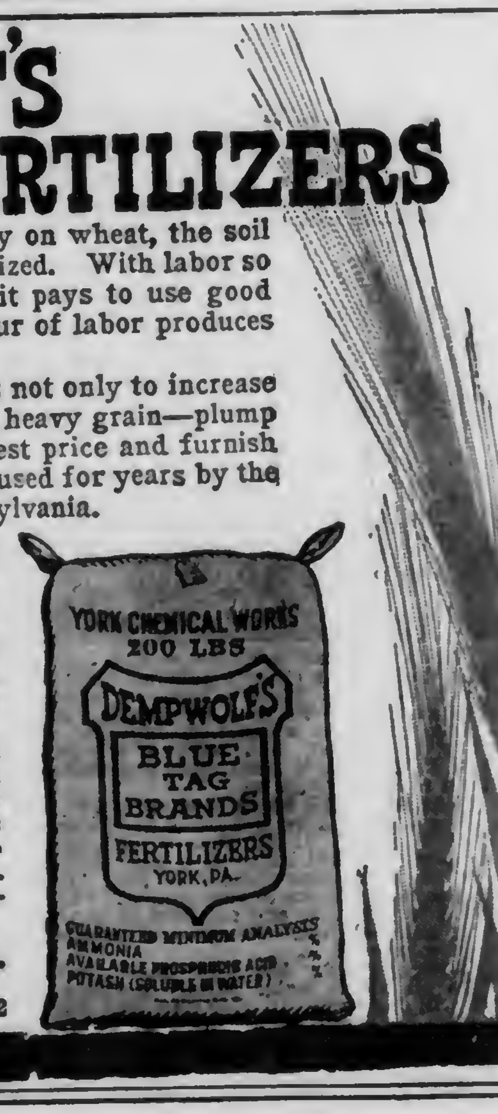

In order to outwit the Hessian fly, wheat should be planted late. The Nitrogen in Dempwolf's Fertilizers enables you to plant late, for it gives the plant a quick start even in cold ground, and enables the crop to resist the ravages of the fly.

Write for full information about Dempwolf's Fertilizers in analyses to suit different soils and crops. We have facilities for prompt shipments, with no congested railway yards nearby. We urge, however, that your order be placed early.

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PENNSYLVANIA FARMER, 261 South Third Street, Philadelphia, Pa.

The Voice of the People

This department is reserved for the use of our readers to discuss all problems and matters of general interest. Write your views and comments briefly on any question of social, economic or educational importance and thus share them with others. It will be necessary to limit such articles to 200 or 300 words. Publication of an article in this department does not signify editorial endorsement.

COMMUNITY LEADERSHIP

A complaint one hears regularly from rural uplifters is that there are too few community leaders. By community leaders they mean resident men and women who are willing to lead in local church work, boys' and girls' club work and in grange or community center activities. The statement that these leaders do not exist could not be true. The leaders may not be very evident but they are there just as surely as the people are there. The great leaders in history were men chosen by the people, and they were of the people. In each of them was recognized a man or woman who knew the popular desire by having come in first hand contact with the affairs of concern at that time.

A shepherd knows the condition of his flock from the sound of its bleat, and just in the same manner a natural leader of people knows from their voice the very thing he can do for their benefit. When a man or woman comes into this relationship with a community by choice of the people there must be something accomplished at once, or another leader is found and results are gotten. If something is accomplished in this way we have a condition that is called self-help. Community leadership and self-help cannot be separated, because one demands the other. At present many communities are not in self-help condition but the leaders are there and in course of time they will be found by the people in the same way they have been found in other places.

Why are not more community leaders at work? Simply because they have been discouraged, robbed, brow-beaten and denounced as unfit to be leaders of more than subordinate rank. To be a leader, a man, so I have been told, must go to college, be appointed a leader by a more highly appointed leader, take all the taxes he can get by political lobbying, if a state employee, or get a big salary if supported otherwise, work in harmony with powers that be and then keep the people kicked back out of the way. It has been my observation that every time a community self-help leader comes up without weapons of organized defense he gets no farther than to where an appointed leader stands ready to demand complete allegiance and homage to those who have the leader business cornered. The man then turns to his people, whom he has led and for whom he has worked, and he then beholds their helplessness.

They have sent their money out to build schools and colleges away from home, their roads are neglected to make big ones between cities, their churches are depleted in money and people, and last and worst, the most aggressive young men and women have gone, often with big sums for tuition to be dropped elsewhere, and leave behind them abandoned farms, schools, churches, etc., and seek brighter prospects behind college or factory doors. The would-be leader and benefactor, bruised in spirit, steps down and out, but not permanently; for today, thanks to American grit and liberty—loving blood, there is a new vision. It is of the day when a leader who has first made good among a few people may become a county or state leader, and when self-help citizens will be organized in counties, states, and nation, and then, not before, rural money for rural life will come back to its owners and there will be no need of uplifters in city offices calling for brave men to arise in the jungle. It is the duty of every farmer to belong to some organization that is headed the right way.—Wm. J. Watts, Clearfield Co., Pa.

"RADICALS"

I have just finished reading the interesting article on "Threatening and Perplexing Problems," by C. C. Hulsart in your issue of June 21st. I was especially impressed with the concluding sentence of his letter: "If radicals will let us farmers alone, I hope for a good season this coming summer."

He has left us in the dark about who he means when he uses the term "radicals." If he means Secretary Lane, professional farmers, college men, etc., he should let his mind rest easy. These men are not radicals. They still believe that "farmers" have a right to speculate in land, and that other men, who "farm farmers," have the right to hold land out of use and make it hard for real farmers to get possession of land on which to work.

There are real radicals, however, in the field and they will, before this month is gone, launch a national political party, for the avowed purpose of destroying private ownership of land by taxing its entire rental value into the various public treasures. This is the only real answer to the problems of land, labor and production. Other methods may and probably will, be tried, but until the source of all wealth—the natural element of land is thrown open to the use of production without having to pay a price or rent to private owners, these methods will fail utterly in benefitting the farmer or any other class. These real radicals —the Single Tax Party—will not leave the farmers or any other class who suffer from the blighting influences of our present land system, until their consciences are awakened and their moral vision restored. We propose to go into every city and county, invade every shop, mill, store and dwelling with our gospel of "The Land for the People."

If Mr. Hulsart will study our proposition, and its justice and morality become apparent to his understanding, then we expect to find him in our ranks enthusiastically and perseveringly shouting the battle cry of Single Tax, but if he finds it immoral and unjust, then he should just as enthusiastically and perseveringly denounce our doctrines and fight our propaganda.

The war is on. There is no neutral zone. The Single Tax means either the restoration of the right of all men to the use of land, or it is a dastardly scheme of class robbery. —Oliver McKnight, 2106 Market Street, Phila.

NEW YORK FAIRS—1919.

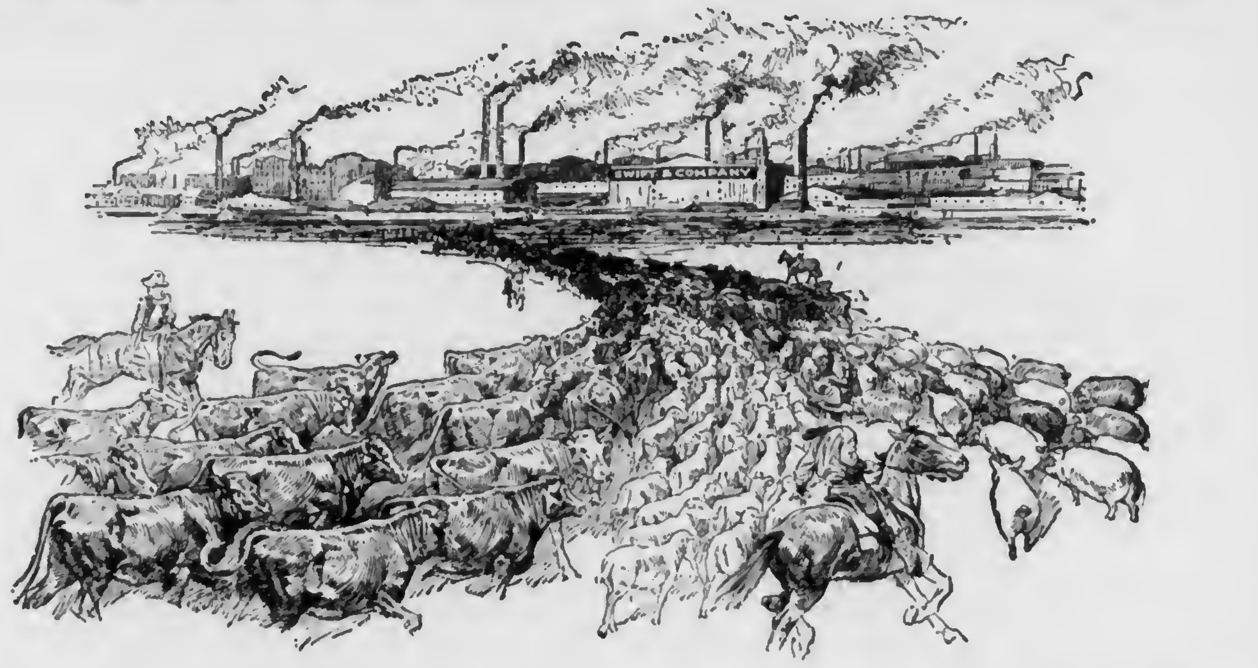
TOWN	COUNTY	DATE
Caledonia	Livingston	Aug. 13-16
DeRuyter	Madison	Aug. 12-15
Middletown	Orange	Aug. 12-16
Cortland	Cortland	Aug. 18-22
Cairo	Greene	Aug. 19-21
Sandy Creek	Oswego	Aug. 19-22
Gouverneur	St. Lawrence	Aug. 19-23
Ellenville	Ulster	Aug. 19-22
Warrensburg	Warren	Aug. 19-22
Cambridge	Washington	Aug. 19-22
Warsaw	Wyoming	Aug. 19-22
Norwich	Chenango	Aug. 26-29
Lowville	Lewis	Aug. 26-29
Brockport	Monroe	Aug. 27-30
Rome	Oneida	Aug. 26-29
Canton	St. Lawrence	Aug. 26-29
Ballston Spa	Saratoga	Aug. 25-29
Hornell	Steuben	Aug. 26-29
Monticello	Sullivan	Aug. 26-29
Trumansburg	Tompkins	Aug. 26-29
Hudson Falls	Washington	Aug. 26-29
Newark	Wayne	Aug. 28-30
Whitney P't	Broome	Sept. 2-5
Little Valley	Cattaraugus	Sept. 1-5
Chatham	Columbia	Sept. 1-4
Walton	Delaware	Sept. 2-5
Westport	Essex	Sept. 2-5
Rochester	Monroe	Sept. 1-6
Fonda	Montgomery	Sept. 1-4
Penn Yan	Yates	Sept. 3-6
Boonville	Oneida	Sept. 2-5
Albion	Orleans	Sept. 3-6
Fulton	Oswego	Sept. 1-5
Cooperstown	Otsego	Sept. 1-3
Troy	Rensselaer	Sept. 1-4
Troupsburg	Steuben	Sept. 2-5
Syracuse	Onondaga	Sept. 8-13
Cuba	Allegany	Sept. 9-12
Dunkirk-Fredonia	Chautauqua	Sept. 9-13
Afton	Chenango	Sept. 9-12
Plattsburg	Clinton	Sept. 9-12
Delhi	Delaware	Sept. 9-12
Cape Vincent	Jefferson	Sept. 9-12
Avon	Livingston	Sept. 9-11
Naples	Ontario	Sept. 10-12
Nassau	Rensselaer	Sept. 9-12
Ogdensburg	St. Lawrence	Sept. 9-12
Owego	Tioga	Sept. 9-12
Altamont	Albany	Sept. 16-19
Angelica	Allegany	Sept. 16-19
Poughkeepsie	Dutchess	Sept. 16-18
Malone	Franklin	Sept. 16-19
Batavia	Genessee	Sept. 16-20
Brookfield	Madison	Sept. 15-20
Canandaigua	Ontario	Sept. 18-20
Oneonta	Otsego	Sept. 15-19
Riverhead	Suffolk	Sept. 16-19
Ithaca	Tompkins	Sept. 16-19
Lyons	Wayne	Sept. 18-20
Hamburg	Erie	Sept. 23-27
Vernon	Oneida	Sept. 25-27
Richfield Sp.	Otsego	Sept. 22-25
Mineola	Queens	Sept. 23-27
Potsdam	St. Lawrence	Sept. 23-25
Cobleskill	Schoharie	Sept. 22-26
Watkins	Schuyler	Sept. 23-26
Waterloo	Seneca	Sept. 23-25
Bath	Steuben	Sept. 23-26
Palmyra	Wayne	Sept. 25-27
New York	New York	Sept. 23-25 Nov. 5-7
Elmira	Chemung	Sept. 30-Oct. 5
Hemlock	Livingston	Oct. 1-3
Morris	Otsego	Sept. 30-Oct. 3
Dundee	Yates	Oct. 8-10
Wellsville	Allegany	Undecided
Binghamton	Broome	Undecided
Moravia	Cayuga	Undecided
Herkimer	Herkimer	Undecided
Watertown	Jefferson	Undecided
Morrisville	Madison	Undecided
Reeds Corn.	Ontario	Undecided
Orangeburg	Rockland	Undecided
New City	Rockland	Undecided
White Plains	Westchester	Undecided
Perry	Wyoming	Undecided

PENNSYLVANIA TRACTOR DEMONSTRATIONS

Two large tractor demonstrations will be held in Pennsylvania this year, one at the Bonny Meade Farm, four miles north of Harrisburg, on August 12 and 13, and one at the Nixon Stop, six miles from Butler, August 21 and 22. These will be the only demonstrations in the state in which a number of tractors will be entered for general demonstrations. The two big shows are under the management of joint committees made up of representatives of the distributors, Pennsylvania State College, county agents and the manufacturers. It is expected that at least 30 tractors of different sizes and makes will be shown.

At the Harrisburg demonstration the allotment for plowing and other tractor work comprises 165 acres. At Butler there will be 125 acres available for the demonstration. In both places the land is rolling and in various crops, so the tractors may be given a full test under normal farm conditions. At both places plowing and fitting will be done on each of the two days, from 10 to 12 A. M., and from 2 to 4 P. M. with lectures by experts from 12 to 2 P. M. each day. The rest of the time will be given over to private demonstrations. The tractors will not compete with each other in drawbar, fuel, speed or other tests, but will simply show how good a job of plowing and fitting they can do, with farmers having the opportunity to study them in detail as to construction and workmanship.

A package of mending tissue, which can be purchased for a few cents at any notion counter, should find a place in every work basket.



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Several such losses would discourage him and he would raise less live stock. Hundreds of other stockmen also would plow up their pastures. The supply of meat animals would diminish.

The packers would not be able to get enough live stock and often their big, expensive plants would be idle. The public would go meat hungry.

In short, for the best interests of everybody, the packers believe it sound to do their full share to maintain an ever open, cash market, and this is accomplished at a profit of a fraction of a cent per pound. This system has encouraged live stock feeding.

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His Native Heath

By JOSEPH C. LINCOLN

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(Concluded From Last Week.)

It was natural for Debby to become excited at the idea of Ase being a medium.

Well, Ase, he wouldn't admit that he was a medium exactly, but he give her to understand that there wa'n't many mediums in this country that could do business 'longside of him when he was really working. 'Course he made believe he didn't want to talk about such things, and likewise of course, that made Debby all the more anxious to talk about 'em. She found out that her new boarder was subject to trances and had second-sight and could draw horoscopes, and I don't know what all. Particular she wanted to know more about that "man" that was going to marry her, but Asaph wouldn't say much about him.

"All I can say is," says Ase, "that he didn't appear to me like a common man. He was sort of familiar looking, and yet there was something distinguished about him, something uncommon, as you might say. But this much comes to me strong. He's a man any woman would be proud to get, and some time he's coming to offer you a good home. You won't have to keep poorhouse all your days."

So the widow went up to her room with what you might call a case of delightful horrors. She was too scart to sleep and frightened to stay awake. She kept two lamps burning all night.

As for Asaph, he waited till 'twas still, and then he crept downstairs to the closet, got an armful of Banners of Light and Mysterious Magazines, and went back to his room to study up. Next morning there was nothing said about wood chopping—Ase was busy making preparations to draw Debby's horoscope.

You can see how things went after that. Blueworthy was star boarder at that poorhouse. Mrs. Badger was too much interested in spooks and fortunes to think of asking him to work, and if she did hint at such a thing, he'd have another "trance" and see that "man," and 'twas all off. And we poor fools of selectmen were congratulating ourselves that Ase Blueworthy was doing something toward earning his keep at last. And then—'long in July 'twas—Betsy Mullen died.

One evening, just after the Fourth, Deborah and Asaph was in the dining room, figgering out fortunes with a pack of cards, when there comes a knock at the door. The widow answered it, and there was an old chap, dressed in a blue suit, and a stunning pretty girl in what these summer women make believe is a sea-going rig. And both of 'em was sopping wet thru, and as miserable as two hens in a rain barrel.

It turned out that the man's name was Lamont, with a colonel's pennant and a million-dollar mark on the foretop of it, and the girl was his daughter Mabel. They'd been paying six dollars a day each for sea air and clam soup over to the Wattagonsett House, in Harniss, and either the soup or the air had affected the colonel's head till he imagined he could sail a boat all by his ownty-donty. Well, he'd sailed one acrost the bay and got becalmed, and then the tide took him in amongst the shoals at the mouth of Wellmouth Crick, and there, owing to a mixup of tide, shoals, dark, and an overdose of foolishness, the boat had upset and foundered and the Lamonts had waded half a mile or so to shore. Once on dry land, they'd headed up the bluff for the only port in sight, which was the poorhouse—altho they didn't know it.

The widow and Asaph made 'em as comfortable as they could; rigged 'em up in dry clothes which had belonged to departed paupers, and got 'em something to eat. The Lamonts was what they called "enchanted" with the whole establishment.

"This," says the colonel, with his mouth full of brown bread, "is delightful, really delightful. The New England hospitality that we read about. So free from ostentation and conventionality."

When you stop to think of it, you'd scurcely expect to run acrost much ostentation at the poor house, but, of course, the colonel didn't know, and he praised everything so like Sam Hill, that the widow was ashamed to break the news to him. And Ase kept quiet, too, you can be sure of that. As for Mabel, she was one of them gushy, goo-gooey kind of girls, and she was as struck with the shebang as her dad. She said the house itself was a "perfect dear."

And after supper they paired off and got to talking, the colonel with Mrs. Badger, and Asaph with Mabel. Now, I can just imagine how Ase talked to that poor, unsuspecting young female. He sartin did love an audience, and here was one that didn't know him nor his history, nor nothing. He played the sad and mysterious. You could see that he was a blighted bud, all right. He was a man with a hidden sorrer, and the way he'd sigh and change the subject when it come to embarrassing questions was enough to bring tears to a graven image, let alone a romantic girl just out of boarding school.

Then, after a spell of this, Mabel wanted to be shown the house, so as to see the "sweet, old-fashioned rooms." And she wanted papa to see 'em, too, so Ase led the way, like the talking man in the dime museum. And the way them Lamonts agonized over every rag mat, and corded bedstead was something past belief. When they was saying good-night—they had to stay all night because their own clothes wa'n't dry and those they had on were more picturesque than stylish — Mabel turns to her father and says she:

"Papa, dear," she says, "I believe that at last we've found the very thing we've been looking for."

And the colonel said yes, he guessed they had.

Next morning they was up early and out enjoying the view; it is about the best view alongshore, and they had a fit over it. When breakfast was done the Lamonts takes Asaph one side and the colonel says:

"Mr. Blueworthy," he says, "my daughter and I am very much pleased with the Cape and the Cape people. Some time ago we made up our minds that if we could find the right spot we would build a summer home here. Preferably we wish to purchase a typical, old-time, Colonial homestead and remodel it, retaining, of course, all the original old-fashioned flavor. Cost is not so much the consideration as location and the house itself. We are—ahem! —well, frankly, your place here suits us exactly."

"We adore it," says Mabel, emphatic.

"Mr. Blueworthy," goes on the colonel, "will you sell us your home? I am prepared to pay a liberal price."

Poor Asaph was kind of throwed on his beam ends, so's to speak. He hemmed and hawed, and finally had to blurt out that he didn't own the place. The Lamonts was astonished. The colonel wanted to know if it belonged to Mrs. Badger.

"Why, no," says Ase. "The fact is—that is to say—you see—"

And just then the widow opened the kitchen window and called to 'em.

"Colonel Lamont," says she, "there's a sail boat beating up the harbor, and I think the folks on it are looking for you."

The colonel excused himself, and run off down the hill toward the back side of the point, and Asaph was left alone with the girl. He see, I s'pose, that here was his chance to make the best yarn out of what was bound to come out anyhow in a few minutes. So he fetched a sigh that sounded as if 'twas racking loose the foundations and commenced.

He asked Mabel if she was prepared to hear something that would shock her turrible, something that would undermine her confidence in human natur'. She was a good deal upset, and no wonder, but she braced up and let on that she guessed she could stand it. So then he told her that her dad and her had been deceived, that that house wa'n't his nor Mrs. Badger's; 'twas the Wellmouth poor farm, and he was a pauper.

She was shocked, all right enough, but afore she had a chance to ask a question, he begun to tell her the story of his life. 'Twas a fine chance for him to spread himself, and I cal'late he done it to the skipper's taste. He told her how him and his sister had lived in their little home, their own little nest, over there by the shore, for years and years. He led her out to where she could see the roof of his old shanty over the sand hills, and he wiped his eyes and raved over it. You'd think that tumble-down shack was a hunk out of paradise; Adam and Eve's place in the Garden was a short lobster 'longside of it. Then, he said, he was took down with an incurable disease. He tried and tried to get along, but 'twas no go. He mortgaged the shanty to a grasping money lender—menain' Poundberry—and that money was spent. Then his sister passed away and his heart broke; so they took him to the poorhouse.

"Miss Lamont," says he, "good-by. Sometimes in the midst of your fashionable career, in your gayety and so forth, pause," he says, "and give a thought to the broken-hearted pauper who has told you his life tragedy."

Well, now, you take a green girl, right fresh from novels and music lessons, and spring that on her—what can you expect? Mabel, she cried and took on dreadful.

"Oh, Mr. Blueworthy!" says she, grabbing his hand. "I'm so glad you told me. I'm so glad! Cheer up," she says. "I respect you more than ever, and my father and I will—"

Just then the colonel comes puffing up the hill. He looked as if he'd heard news.

"My child,' he says in a kind of horrified whisper, "can you realize that we have actually passed the night in the—in the almshouse?"

Mabel held up her hand. "Hush, papa," she says. "Hush. I know all about it. Come away, quick; I've got something very important to say to you."

And she took her dad's arm and went off down the hill, mopping her pretty eyes with her handkerchief and smiling back, every once in a while, thru her tears, at Asaph.

Now, it happened that there was a selectmen's meeting that afternoon at four o'clock. I was on hand, and so was Zoeth Tiddit and most of the others. Cap'n Poundberry and Darius Gott were late. Zoeth was as happy as a clam at high water; he'd sold the poorhouse property that very day to a Colonel Lamont, from Harniss, who wanted it for a summer place.

"And I got the price we set on it, too." says Zoeth. "But that wa'n't the funniest part of it. Seem's old man Lamont and his daughter was very much upset because Debby Badger and Ase Blueworthy would be turned out of house and home 'count of the place being sold. The colonel was hot foot for giving 'em a check for five hundred dollars to square things; said his daughter'd made him promise he would. Says I: 'You can give it to Debby, if you want to, but don't lay a copper on that Blueworthy fraud.' Then I told him the truth about Ase. He couldn't hardly believe it, but I finally convinced him, and he made out the check to Debby. I took it down to her myself just after dinner. Ase was there, and his eyes pretty nigh popped out of his head.

"'Look here,' I says to him; 'if you'd been worth a continental you might have had some of this. As it is, you'll be farmed out somewheres—that's what'll happen to you.'"

And as Zoeth was telling this in comes Cap'n Benijah. He was happy, too.

"I cal'late the Lamonts must be buying all the property alongshore," he says when he heard the news. "I sold that old shack that I took from Blueworthy to that Lamont girl today for three hundred and fifty dollars. She wouldn't say what she wanted of it, neither, and I didn't care much; I was glad to get rid of it."

"I can tell you what she wanted of it," says somebody behind us. We turned round and 'twas Gott; he'd come in. "I just met Squire Foster," he says, "and the squire tells me that that Lamont girl come into his office with the bill of sale for the property you sold her and made him deed it right over to Ase Blueworthy, as a present from her."

"What?" says all hands, Poundberry loudest of all.

"That's right," said Darius. "She told the squire a long rigamarole about what a martyr Ase was, and how her dad was going to do something for him, but that she was going to give him his home back again with her own money, money her father had given her to buy a ring with, she said, tho that ain't reasonable, of course—nobody'd pay that much for a ring. The squire tried to tell her what a no-good Ase

was, but she froze him quicker'n—Where you going, Cap'n Benije!"

"I'm going down to that poorhouse," hollers Poundberry. "I'll find out the rights and wrongs of this thing mighty quick."

We all said we'd go with him, and we went, six in one carryall. As we hove in sight of the poorhouse a buggy drove away from it, going in t'other direction.

"That looks like the Baptist minister's buggy,' says Darius. "What on earth's he been down here for?"

Nobody could guess. As we run alongside the poorhouse door, Ase Blueworthy stepped out, leading Debby Badger. She was as red as an auction flag.

"By time, Ase Blueworthy!" hollers Cap'n Benijah, starting to get out of the carryall, "what do you mean by——Debby, what are you holding that rascal's hand for?"

But Ase cut him short. "Cap'n Poundberry," says he, dignified as a boy with a stiff neck, "I might pass over your remarks to me, but when you address my wife———"

"Your wife?" hollers everybody—everybody but the cap'on; he only sort of gurgled.

"My wife," says Asaph. "When you men—church members, too, some of you—sold the house over her head, I'm proud to say that I, having a home once more, was able to step for'ard and ask her to share it with me. We was married a few minutes ago," he says.

"And, oh, Cap'n Poundberry!" cried Debby, looking as if this was the most wonderful part of it—"oh, Cap'n Poundberry!" she says, "we've known for a long time that some man—an uncommon kind of man—was coming to offer me a home some day, but even Asaph didn't know 'twas himself; did you, Asaph?"

We selectmen talked the thing over going home, but Cap'n Benijah didn't speak till we was turning in at his gate. Then he fetched his knee a thump with his fist, and says he, in the most disgusted tone ever I heard:

"A house and lot for nothing," he says, "a wife to do the work for him, and five hundred dollars to spend? Sometimes the way this world's run gives me moral indigestion."

Which was tolerable radical for a Come-Outer to say, seems to me.

WHAT HAPPENED TO THE BIRTHDAY CAKE

"It will need four eggs and a cup of sugar and some milk and some flour," mother said, as she went to the pantry to get the yellow mixing bowl and the sifter to make Barbara's birthday cake.

"It needs sugar, too, for the frosting and please make very thick frosting, mother dear," Barbara begged. She was standing beside the kitchen table, watching, for she was going to be six years old in just a few days. It was to be her birthday cake, rich and sweet, and shining on the supper table with six pink, lighted candles.

"I am afraid that the cake and the frosting together will use up all our sugar," mother said as she came back. "I wonder," she went on, with just a little bit of worry in her voice, "if we could manage with two eggs in stead of four. Eggs cost so much now."

"Well, we have to make a birthday cake, don't we mother, because I always cut it and share it?" Barbara said. Mother looked down in Barbara's kind little face and she thought a moment, too. That was the wonderful part about mother and Barbara, they so often thought the same things. Then they said something to each other, laughed, and hugged each other, and mother put away the big yellow mixing bowl and flour sifter.

The next day was Barbara's birthday and two people who didn't have birthdays had surprises.

Timothy, whose mother did the washing, had been very ill for a long time. He was getting better, and could sit in the big rocking chair, all wrapped up in a quilt, and try to smile out thru the window when Barbara passed. Barbara stopped at Timothy's door on the morning of her birthday. She had a basket on her arm. She took from it a bottle of creamy milk and a bag that held four white eggs.

"Here is a part of my birthday cake for you, Timothy," Barbara said. "It will make you get well faster."

Granny Blake was just putting her tea kettle on her stove when she heard a knock at the door of her little house. When she opened it she saw Barbara who loved Granny Blake so much. No one could make such nice rag dolls as Granny, and she was always cheerful and smiling, even when she had hardly enough coals to make her kettle boil.

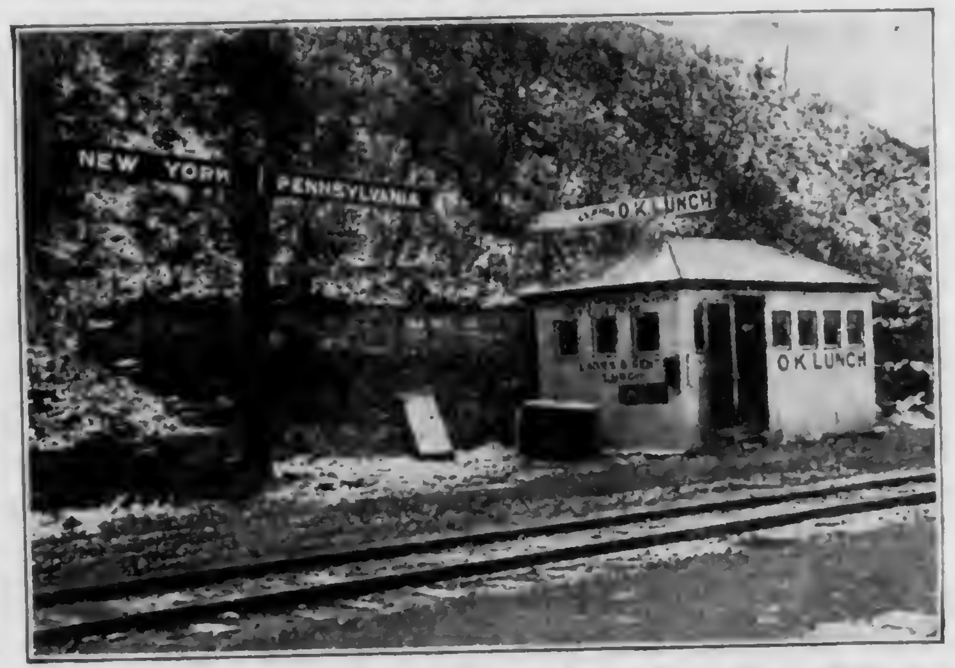
Barbara still carried her basket, and she took a package of sugar and a freshly baked loaf of wheat bread out of it.

"Here is a part of my birthday cake for you, dear Granny," Barbara said. "This is sugar for your tea, and mother made the flour into a loaf of bread for you to eat with it."

Then Barbara went home almost as happy as if she had eaten a large piece of frosted birthday cake. But when the day was almost over and it grew dark, Barbara began to wish that she could see the six pink lighted candles shining for her birthday. She went slowly in to supper, thinking of them. And, oh, what a surprise she found there!

In a rosy circle in the middle of the table shone six pink, lighted candles set in six pink rosebud holders. In the center of this birthday circle of lights was a bowl that held six beautiful pink roses from the garden and beside Barbara's plate was a parcel wrapped in pink tissue paper. When Barbara blew out the candles and opened the parcel she found a pink hair ribbon for a birthday present.

"What a beautiful birthday this has been, mother," Barbara said, "without a birthday cake!"



Restaurant at Lawrenceville, Pa., Where Patron May Stand With One Foot in New York State and One in Pennsylvania

FUN WITH THE WOOD-CHUCKS

Yes, sir, that meadow where Dad and us boys have been haying, is just all dug up with wood chucks. Why, say, do you know, I counted twenty-seven holes from the top of a load of hay?

You know the meadow I mean, over crost the railroad tracks. We have to draw the hay crost the tracks to get it up to the barn, and we have to drive the cows back and forth crost the tracks too. One of us looks to see that there ain't no trains coming and then he opens the gates and tother one hurries the cows crost the tracks.

Theys a big camp of Italians right side of the railroad just below our crossing. Tother night, just after we got the chores done, Dad looked over there in the meadow and says, "Theres someone over there in the hay fields. Looks as if he was digging out a wood chuck hole. Guess I'll go over and see."

So we all went over, cause you know some Italians are awful fond of wood chuck meat, and are always looking for them. When we got over there Dad says "Hello, what you think your doing?"

"O, nothing boss, nothing, only jest setting some traps to catcha da wood chuck."

Dad says, "all right, I thought perhaps you was going to try to dig him out, and I don't want you to do that because it spoils the seeding so. Last fall some one dug out several big holes and I had to fill them up again."

The Italina says, "O, no, no, boss. Me no diga dem out; too mucha harda work. Catcha him in da trap. No such harda work. Too beega da job, diga da hole in hot weather."

"All right,' Dad says, "only don't dig up the lot."

"Sure, boss, me no diga da holes. Me taka da traps up you saya so."

"No, no," Dad says, "catch all you want to in the traps."

"Alla righta, me catcha him chuck have gooda dinner morrow sure."

Next morning when we went over by the traps after the cows, what do you suppose was in his trap? A great big white skunk. Say I just wish I'd a been there to see that fellows face, when he saw what he had caught.

Next day we were drawing in hay from another field, and we see a wood chuck sitting in the grass. Dad whistled shrill at him and he set up on his hind feet to see what it was.

Dad says to me, "I dare you to go kill him." I thought he was fooling and I says "Do you mean it?" He says "Yes, I'll whistle to attract his attention and you get between him and his hole."

I took a strong stick and crept round tween him and his hole, and then I jest showed Dad, whether I dared kill him or not. Dad seems to think cause I'm only ten, that I wouldn't dast do it, but I did just the same. Dad says "good for you, your a braver lad than I thought."

My brother George says "Lets take him over and sell him to the Italians." So we took Mr. Chuck up to the barn and tied a string on him and hung him up where it was cool and shady, till night, and when it was about six o'clock and time for the Italians to come back from their work, we took the wood chuck and went over, side of the track, above their camp.

I kinda hated to ask them to buy it, so George said that he would ask them about it if I would divey up with him. I told him I would so when the men comenced to go by to camp, George held up the wood chuck, where they could see him and says "Want to buy him?" The first hand car load jest laughed and said "Phew, go bury him queek." But the next ones slowed down their hand car and were going to stop. But one fellow, he jumps off, and started over where we was, so the others went on. He came up to us and says.

"Where you get hem? Finda hem deda somewhere?"

We says, "No, sir," and told him how I killed him that same day.

He said "Killa heem today? Sure now, boy?"

"Yes, sir, I did kill him today, just as I said."

"Now, boy, you sure yous tella me da truth?"

"Yes, sir, I wouldn't lie about it."

He laughed and then he pulled some hairs out of the chuck's hide and said," alla right. How mucha you want for heem?

George said. "O, ten or fifteen cents, I guess."

"Alla righta, me taka heem." Then he got out his money. Say, you just ought to have seen the bag of money that fellow had. I'll bet theres more than enough to buy an autobeel and then some. Regular belt it was; went right round his waist. And it was pretty near full, too.

Well he counted out the fifteen cents, two nickels and five pennies, tied his belt back around him, under his clothes, and picked Mr. Woodchuck up by the tail.

Starting off down the tracks he said, "Ah-h! gooda dinner now."—Bob.

Six-year-old Margaret often played with Nellie, a neighbor's little girl. One rainy day the two were just starting across the clean kitchen floor at Margaret's home when the latter's mother, seeing their muddy shoes, headed them off and sent them out to play on the porch. After a moment, Nellie remarked:

"My mother don't care how much I run over the kitchen floor."

There was quite a long interval of silence. Then Margaret said: "I wish I had a nice, dirty mother like you've got, Nellie."

We shall beat our swords into plowshares and our corkscrews into buttonhooks.—Brooklyn Eagle.

Any man can work when he feels like it. The successful man works whether he feels like it or not.

Markets

PHILADELPHIA PRODUCE

Philadelphia, Pa., July 14, 1919.

movement of potatoes from New Jer- well under way and by next week be very nearly at its height. The farmers are hauling in very freely time, and strictly fancy stock is a very active demand with prices rm at $1.15-1.30 per ⅝ basket for otatoes, with medium size at $1- and No. 2s at 50-65c per basket. With plies from New Jersey getting more , of course it is but natural that ings from the southern states would Today there were only 22 cars of potatoes here, most of which were e Eastern Shore of Virginia with a Norfolk, North Carolina and Mary- Eastern Shore potatoes are now sell- und $5.75-6.75 per barrel for primes, all other southern potatoes sold at per barrel. No. 2 potatoes sold 2.50-3.50 per barrel. The outlook for nued good market on potatoes is very e, and it is believed that the New crop will command high prices all season.

Vegetables

is still a little asparagus arriving e market and selling in a slow way as s 35-40c per bunch for best with grades ranging on down to 10-15c per . Both the supply and demand at this however, is very limited. Green and ns after selling at extremely low for several days past are now doing tter when the beans are fancy in sales being made today at 75c-$1 basket for good green beans while beans sold from 50-75c per basket. e, however, quite a number of poor the market and these are hard to price. Bunched beets have been y liberal supply, but under an active the market has ruled firm and ac- most sales ranging from 3-4½c per . New carrots on the other hand n meeting a rather slow demand un- vy supplies and prices have eased off , with sales now ranging generally -3c per bunch.

ur last week's report the cabbage has been very freely supplied and ased off considerably, but there is reaction taking place in the market es are a little higher then they were go. Good New Jersey cabbage is 60-75c per ⅝ basket, while the stock from Pennsylvania brings 2.25-2.75, with an occasional extra up to $3 per barrel. The market lso took a tumble and prices eased y, but there has been a reaction market and good corn sold today at 75 per ⅝ basket. Celery from the adows, N. J., section and also New e celery is in fair demand at 50c- bunch. Since our last week's report s have been very scarce and sold at the fine price of $3-3.25 per d $7-8 per barrel. At the present however, supplies are more liberal market is lower, good Maryland and stock selling at $1.75-2.25 per while the barreled cucumbers sold 50-5.50 per barrel. There are quite ew Jersey cucumbers arriving and selling at $2-2.50 per ⅝ basket. very limited number of egg plants e market and sales ranged today at per ⅝ basket.

has been selling very nicely, sup- ing from New York state and New the New York state showing a little ter quality at this time and selling 2 per box, while the hamper stock 75c-$1.50 per hamper. Onions are erate supply and under a good de- nd movement the market is firmer ttle higher, hampers selling at $2.75- th ⅝ bushel baskets at $1.50-2 for ew onions, while the large white lls at $3-3.50 per bushel hamper; white onions or boilers, $4-4.50 per r. Parsley is showing a little improve- nd bringing $1-1.50 per hamper con- 100 bunches. Peas have been very nd high prices have been ruling. A of New York state peas have sold $4-4.25 per bushel basket, while New y peas have been selling from $2.50- a basket. Peppers continue in light with the market ruling firm at $1.50- r basket. Radishes are in moderate y and demand fairly active at 2-3c ch. Rhubarb is still on the market ng about steady at 4-5c per bunch. is a little firmer at $1-1.50 per for fancy stock with ordinary grades at 50-75c per box.

ecline in squash market as reported e columns last week was followed by further decline as supplies became eral and prices dropped to as low c per ⅝ basket. The supplies at s writing, however, are not so plentiful market is showing a little reaction most sales ranging from 50-60c per As was to be expected, the market matoes is very much lower than it a week ago when very high prices were ng owing to the extremely light sup- Most No. 1 tomatoes sold today at 2 per ⅝ basket and No. 2s at 50- c per basket. These prices are, however, igh and with the supplies increasing lower prices are bound to prevail. re a few lima beans making their ap- and selling around $4-5 per bushel Rutabagas are in fair supply but a very slow demand at 50-65c per Spinach is very scarce and bring- extremely high price of $2-2.50 per Watercress is in light supply but de- light at this season with prices g from 2-2½c per bunch.

Fresh Fruits

the supplies of apples getting more every day, especially from nearby New Jersey and Pennsylvania points, lower are prevailing. The same quality of es that sold a week ago at $2-2.50 per bushel basket sold today at $1.50-1.75 et. A car of West Virginia apples this morning at $2.50 per bushel for with No. 2's at $1.50 per bushel. Some of the nearby apples are very poor and sell as low as 25-50c per basket, but good hand picked fruit of various varieties is selling mostly from 85c-$1.50 per basket with very best at $1.75. Heavy receipts of blackberries caused the market to drop today some 3-5c per quart as most sales were being made around 18-20c per quart, with some pretty fair berries at 15-17c per quart. Huckleberries on the other hand are firm, fancy Pennsylvania mountain huckleberries selling at 25-28c per quart and the New Jerseys at 20-25c per quart. Red raspberries are showing a wide range in quality, the best bringing 15-17c per pint with poor from 12-14c per pint.

Red currants have recovered the decline of last week and are now again selling at 18-20c per quart, with practically all supplies coming from New York state. Gooseberries are now mostly poor and over ripe and only bringing 8-10c per quart generally, altho strictly fancy green ones would command higher prices. Only a very few sour cherries are arriving on the market from New York state and these are selling around $1.50 per 8-pound basket.

Poultry

The market on live fowls is fully 4 cents per pound higher then it was a week ago. The lower prices then prevailing seems to have stimulated demand and stopped shipments with the result that our market was well cleaned up of all stock. Today, under the light offerings, there was a strong demand which absorbed all supplies quickly at 40-41c per pound. Spring chickens are also firmer than they were a week ago, the best grades being about 2 cents per pound higher, with prices now ranging from 40-52c per pound for chickens not Leghorns, while the Leghorns which are not as desirable sell at 38-42c per pound, or just about the same basis as last week. Old roosters are a little firmer at 24-26c per pound.

Eggs

Our prediction in these columns last week of a continued firm market on eggs has been justified as the market has ruled firm and active on strictly fancy eggs at unchanged prices. On the under grade eggs, however, the market is weak and showing a wide range as to quality, some eggs being greatly defective from the hot weather conditions. At this writing Pennsylvania and other nearby current receipts are selling at 48c per dozen, with firsts at 50c per dozen. Seconds are showing the wide range of 36-43c per dozen. Western extra firsts bring 50c and Western firsts 48c per dozen. Southern eggs are also showing the defects incident to warm weather and are ranging from 41-45c per dozen, as to quality.

LANCASTER PRODUCE MARKET

Lancaster, Pa., July 14, 1919.

Butter advanced quickly and without apparent reason today to 70 cents per pound, some sales being reported at five cents less. Eggs were firm at 48 cents. On the other hand, watermelons that sold for one dollar last week, were offered generally at 40 cents. The sprinkling of huckleberries sold for 25 cents per quart. Beans declined, as did new potatoes which were offered in large quantities.

Butter and Eggs.—Creamery butter, 70c lb., country butter, 65-70c lb.; fresh eggs, 48c doz.; ducks eggs, 50c doz.; goose eggs, 10 cents each.

Poultry.—Dressed old chickens, $1.70-2 each; dressed young chickens, $1.60-1.90 each; do., very small, $1-1.10 each; live fowls, 28c lb. Few offered.

Vegetables.—Spinach, 20c per ½ peck; turnips, 15c per ½ peck; potatoes, 25-30c per ½ peck; do., $2-2.25 bushel; sweet potatoes, 50c per ½ pk.; cabbage, 5-10c head; cauliflower, 10-15c head; lima beans, 10-15c pint; tomatoes, 20-25c box; beans, 10-14c per ½ peck; beets, 5c bunch; lettuce, 15-20c head; rhubarb, 5c bunch, corn, 60c dozen.

Fruits.—Raspberries, 20c box; blackberries, 20-25c quart; huckleberries, 25c quart; watermelons, 40-50c each; cantaloupes, 10-12c each; apples, 25c per ¼ peck.

Grain Market.—Wheat, $2.20 bu.; rye, $1.50 bu.; oats, 80c bu.; ear corn, $1.75 bu.; timothy hay, $37 ton; mixed hay, $35 ton; wheat straw, $15 ton; oat straw, $12 ton.

YORK PRODUCE MARKETS

York, Pa., July 14, 1919.

There are few changes in the ruling prices of the past week. The berry season, with the exception of blackberries, which no account of the dry weather promises a light crop, is over. The cabbage season is also about at an end. The Little Adams corn sold as high as 50c for a few dozens, but has come down rapidly.

Eggs.—42-45c per dozen.

Butter.—Country, 55-60c lb.; separator, 60-65c lb. Milk, 10c quart.

Poultry.—Hens, 28-29c lb.; springers, 35-36c lb.; dressed, $1.25-2.50.

Vegetables.—Potatoes, 20-30c ½ pk.; cabbage, 5-15c hd.; lettuce, 2-5c hd; beets, 3-5c bunch; radishes, 3-5c bunch; onions, 2-5c bunch; lima beans, 15-20c pint; soup beans, 10-12c pint; celery, 5-15c stalk; rhubarb, 3-4c bunch; asparagus, 8-12c bunch; lard, 32c pound.

Fruit.—Apples, first new ones on the market, 20-50c ½ peck; raspberries, 18-25c bx; blackberries, 15-25c box; currants, 15c bx.; huckleberries, 20-30c box.

Retail Grain Market.—Wheat, $2.50; corn, $1.90; oats, $1.01; rye, $1.65; bran, $2.25 cwt.; middlings, $2.85 cwt.

Wholesale Grain Market.—Wheat, $2.30; corn, $1.72; oats, 78c; rye, $1.40; bran, $45 per ton; middlings, $56 per ton.

BALTIMORE PRODUCE

Baltimore, Md., July 14, 1919.

Produce.—Potatoes, new, No. 1, $2.50-3 cwt.; do., No. 2, $1.25-1.50 bbl. Cabbage, new, $2.25-2.75 crate; do., $7-14 per 100. Lettuce, 50c-$1 basket. Onions, nearby, $2.65-2.85 basket. Spring onions, $1-1.25 per 100 bunches. Rhubrab, 3-4c bunch. Cucumbers, $1-1.15 basket. Spinach, 75c-$1 basket. Carrots, 2-3c bunch. Green beans, 75c-$1.15 hamper; do., wax, 75c-$1.25 hamper. Beets, 2-3c bunch. Peas, $1.50-3 bu. Green corn, 15-25c dozen. Tomatoes, $1-2 basket. Squash, 40-50c basket.

Fruit.—Apples, early harvest, $2.50-5.00 bbl.; $1-2 bkt. Cherries, 15-25c quart. Gooseberries, 10-13c lb. Blackberries, 20-27c quart. Red rsapberries, 16-18c quart; do., black, 25-30c. Currants, 15-20c quart. Huckleberries, 16-20c quart.

Butter.—Creamery, western fancy, 53-54c; choice, 51-52c; pound prints, 54-56c. Nearby rolls, 45-46c. Dairy prints, 45-46c.

Eggs.—State, Pennsylvania and nearby, 44-45c; Eastern Shore and Virginin, 43-44c. Southern, 42-43c.

Live Poultry.—Springers, 42-48c lb.; old roosters, 22-23c; old hens, 37-38c lb.; ducks, 24-27c; do., spring, 35-40c; pigeons, 35-40c pair; guinea fowls, 50-70c each.

Grains.—Wheat, new, bag lots, $2.30-2.38¾ bu., as to quality. Corn, bag lots, No. 3, $2.10 bu. Oats, standard white, 86c; No. 3 white, 85c. Rye, nearby, $1.45-1.50.

Hay.—No. 1 timothy, $34-35 ton; do., standard, $33-34 ton. Light clover, mixed, $29-31 ton. Clover, mixed, $25-30. Clover clear, $25-27 ton. Tangled rye straw, $11.50-13.50. Wheat straw, $7.50-8.50 ton. Oat straw, $11-12 ton.

Mill Feeds.—Winter wheat bran, $53 ton; brown middlings, $53 ton; white middlings, $63 ton.

NEW YORK PRODUCE

New York City, July 14, 1919.

Butter.—Steady; receipts, 15,314. Creamery, higher than extras, 54¼-55c; creamery, extras (92 score), 53½-54c; firsts, 51-53c; packing stock, current make, No. 2, 45c.

Eggs.—Irregular; receipts, 18,549 cases; fresh gathered, extras, 51-53c; fresh gathered, extra firsts, 47-50c; firsts, 43-46c; state, Pennsylvania and nearby western hennery whites, fine to fancy, 56-58c; state, Pennsylvania and nearby hennery whites, ordinary to prime, 47-55c; state, Pennsylvania and nearby hennery browns, 54-56c; do., gathered browns and mixed colors, 50-53c.

Cheese.—Firm; receipts, 3,181; state whole milk flats, current make, specials, 32¼-32¾c; do., average runs, 31¼-32c; state, whole milk, twins, current make, specials, 32¾c; do., average run, 31¾c.

Live Poultry.—Steady; broilers, 45-50c; fowls, 38c; old roosters, 24c; turkeys, 25-30c. Dressed steady; broilers, 31-55c; chickens, 40-43c; fowls, 29-38c; old roosters, 19-23c; turkeys, 46-49c.

Vegetables.—Potatoes, new, No. 1, $5-7 bbl; No. 2, $2.50-4 bbl. Beans, 50c-$1.75 bas. Beets new, $3-4 per 100 bunches. Carrots, new, $3-4 per 100 bunches. Scullions, $1-2. Cabbage, $2.50-3 crate. Lettuce, 25c-$1 basket. Tomatoes, Jersey, No. 1, $1.50-3 box; culls, 75c-$1.

Fruit.—Apples, $2.50-3.50 basket. Strawberries, 20-30c quart; raspberries, 6-14c pint; peaches, $1-2.50 crate. Jersey, 50-75c basket. Cherries, red sweet, 8-lb. bas., $1-1.25; red sour, do., 75-90c. Gooseberries, 10-20c quart.

PHILADELPHIA LIVE STOCK

Philadelphia, Pa., July 14, 1919.

Receipts of live stock for three days ending July 12 were as follows:

	Beef Cattle	Sheep and Lambs	Hogs
Total for Week	...1,989	4,305	5,163
Previous Week	...1,924	3,387	4,964

Calves.—Receipts of calves last week were 2,064 head against 2,121 head week previous.

Beef Cattle.—There was an advance in prices of steers and calves, due to light offerings and a fairly active demand. Other descriptions were firmly held.

Steers, fair to good, $14.50-16; common to fair, $12.50-14.50; cows, fat, per pound, good to choice, corn fed, 10-11½c; fair to good, 8-10c; do., common to fair, 6½-8c; Bologna cows, good, fleshy, 5½-6½c; ordinary, 4½-5½c; calves, extra choice, $22.50-23; fair to good, $20.50-21; common, $15.50-18.50; heavy, $10.50-12.50; Tennessee, choice, $16-18.50; other southern, $10.50-14.50.

Sheep and Lambs.—Demand was fair for desirable stock and values generally ruled steady under moderate supplies. Quotations: Sheared wethers, extra, $10.50-11; good to choice, $9.25-10; medium, $7.50-8.50; common, $4-5.50; ewes, fat, heavy, $7.50-8.50; spring lambs, choice, $18.50-19; medium, $15.50-17; do., culls and common, $12-14.

Hogs.—Receipts of western hogs were light and the market ruled firm and higher with demand fair. Nearby stock was in fair request and values were well maintained. Quotations for best westerns, $24.50-25; Pennsylvania and Maryland, $23.

City Dressed Stock.—The general market ruled firm and higher, with demand equal to the limited offerings of desirable stock.

Quotations:

Steers, 22-25c; heifers, 19-23c; cows, 17-20c; calves, city dressed, choice, 28-30c; country dressed, 24-26c; sheep, 16-22c; lambs, spring 30-34c; hogs, 30½-31c.

LIVESTOCK

Pittsburgh, Pa., July 14.—Cattle.—Receipts, 2,000; higher; steers, $13.50-14.50; heifers, $12.50-14; cows, $10-12.

Hogs.—Receipts, 5,000; steady; heavies and heavy yorkers, $23.40-23.50; light yorkers, $22.50-22.75; pigs, $22.25-22.50.

Sheep and Lambs.—Receipts, 5,000; top sheep, $10.50; top lambs, $17.50.

Calves.—Receipts, 2,500; lower; top, $21.50.

PHILADELPHIA HAY AND GRAIN

Philadelphia, Pa., July 14, 1919.

Baled Hay and Straw.—Receipts, 36 tons hay and no straw. Steadily held but quiet. Quotations:

Timothy, No. 1, $38-39, exceptional lots higher; No. 2, $36-37; No. 3, $32-33; clover-mixed hay, light and mixed, $36-37; No. 1 do., $34-35; No. 2, do., $31-32; No. 1 straight rye, $13-13.50; No. 2 do., $12-12.50; No. 1 tangled rye, $12.50-13; No. 2 do., $11.50-12; No. 1 wheat straw, $12-12.50; No. 2, $11-11.50; No. 1 oat straw, $12-12.50; No. 2 do., $11-11.50.

Bran.—Scarce and higher. Car lots, including sacks soft winter bran, in 100-lb. sacks, per ton, $44.50-45; spring bran, in 100-lb. sacks, per ton, $43-44.

Wheat.—No. 1 Red Winter, $2.39; No. 2, $2.36.

Corn.—Yellow, as to grade, $2.10-2.14.

Oats.—No. 2, white, 85½-86c.

NEW YORK HAY AND GRAIN

New York City, July 14, 1919.

Feed.—Firmness again prevailed in the market for mill feed but the action of values was due more to a scarcity of offers than to any increase in the demand. Buyers are taking as little feed as possible and apparently believe that before long new feed will be available at lower figures.

Quotations: City feed, bran, $43; middlings, $52, in 100-pound sacks; red dog, $64, nominal, in 100-pound sacks; Western spring bran, $43; standard middlings, $50.50-51.50; flour middlings, $58-59; red dog, $65.50, all in 100-pound sacks, 30-day shipment. Oat feed, $32.50; rye middlings, $45; white hominy feed, $73, all in 100-pound sacks. Cottonseed oil meal, nominal; linseed oil meal, nominal, in 100-pound sacks.

Hay and Straw.—There is still a demoralized market on small baled hay, prompt selling values uncertain and very irregular. Most sales $22-27 per ton. Very little No. 1 large offerings; such if here might possibly reach top figure, which is nominal in the absence of sales.

Hay.—No. 1 large bales, $38-40 ton; No. 2, $35-37 ton; No. 3, $30-34; Shipping, $26-28 ton. Fancy light clover mixed, $35-37 ton. Clover, No. 1 mixed, $34-36.

Straw.—Per ton, No. 2 rye, $13.

Wheat.—No. 2 red, $2.37½. No. 3 hard winter, $2.37½.

Corn.—No. 2 yellow, $2.12½. No. 3 yellow, $2.11¼.

Oats.—Standard, 87½c.

Rye.—Export, $1.73.

PHILADELPHIA DAIRY MARKET

Philadelphia, Pa., July 14, 1919.

Butter.—Receipts, 2,704 tubs. The market was nominally unchanged. The Produce Exchange was closed and there was scarcely any wholesale trading. We quote:

Fresh, solid-packed creamery, extra, 53c; high-scoring goods, 54-56c, the latter for jobbing sales; extra firsts, 52c; firsts, 50-51c; seconds, 48-49c; thirds, 45-47c; sweet creamery, choice and fancy, 55-57c; do., fair to good, 50-54c; ladle-packed, as to quality, 47-48c; packing stock, 43-44c; fancy brands of nearby prints jobbing at 59-61c; good to choice, 54-58c; fair, 49-52c.

Cheese.—Firmly held. Offerings moderate. We quote the following prices: New York and Wisconsin flats, current make, choice, 32½-33c; specials higher; fair to good, 31½-32c; jobbing sales of fancy goods, 33½-34½c.

NEW YORK MILK MARKET

New York City, July 14, 1919.

Demand last week was fairly active altho hardly up to expectations for this time of year. The high price of ice crema with additional war tax has hurt the business to some extent. Surplus was not so heavy. The rate for July in 200 mile zone for 3 percent milk is $3.01 per 100 lbs.; the 3.06 percent milk is $3.25 and the 4 percent $3.41.

Receipts of milk and cream in 40-quart cans for the week ending July 12th, 1919, were as follows:

Railroads	Milk	Cream
Erie	40,081	5,163
Susquehanna	6,917	180
West Shore	16,420	2,362
Lackawanna	62,866	3,384
N. Y. Central (long haul)	154,419	4,649
Ontario	46,920	1,927
Lehigh Valley	86,686	1,957
New Haven	6,744	72
Pennsylvania	12,310	463
Other Sources	6,400	250
Totals	409,763	20,407
Same week last year	391,835	20,647

WOOL MARKETS

The Boston "Commercial Bulletin" of July 12 says: "The market for wool continues fairly active with prices showing a constantly stronger tendency, altho there has been no material appreciation during the past week. In the West, however, prices are slightly higher, and the clip is rapidly moving into consuming channels.

"The demand for goods apparently is continuing without abatement, but the mills are reluctant to commit themselves further."

Ohio and Pennsylvania fleeces—Delaine washed, 85-88c; delaine unwashed, 80-82c; fine unwashed, 61-62c; ½-blood combing, 73-75c; ⅜-blood combing, 68-70c.

Michigan and New York fleeces—Fine unwashed, 59-60c; delaine unwashed, 75-78c; ½-blood unwashed, 70-72c; ⅜-blood unwashed, 67-69c.

Wisconsin, Missouri and average New England—½-blood, 67-68c; ⅜-blood, 65-67c; ¼-blood, 63-64c.

Virginia, Kentucky and similar—½-blood unwashed, 75-77c; ⅜-blood unwashed, 70-72c.

TOBACCO MARKET

Reports from Kentucky, the largest producer of plug and fine cut tobacco in the world, indicate a generally backward condition of the new crop which has just been transplanted. Altho insects have hindered even less than usual, many of the tender seedlings have perished in the field, necessitating much replanting which can but result in an uneven growth and results which preclude minimum quality. The same trouble exists in the other burley growing states, including Ohio as well as in the Carolinas and Virginias. And now that the transplanting season has closed the above difficulty has resulted in a very poor stand in many instances which will come in for consideration in forecasting the probable product of the year. It is said that much of the increased acreage will be thus offset. Illustrating the deficiency we may note an instance of a grower with nine acres out who estimated his missing plants at least three acres. The same applied to the whole crop would mean a significant shortage. In Pennsylvania and the other cigar tobacco states, less trouble has been reported and transplanting is now completed. In fact a writer in one state has said that growers never had so little trouble in getting a satisfactory stand, cut worms and other bothersome insects causing but little trouble. There was an active demand for the now greatly diminished residue of the 1918 product, and prices were higher than heretofore. All those who held are now glad they did so and for those who hold longer there seems to be still more profit.

GOOD MILKING SHORTHORN SALE

The Bradford County Milking Shorthorn Breeders' Association sale, held at Troy, July 1, ranks as one of the most successful sales of the season. Seventy animals were sold for a total of $41,850, an average of $598 each. The 20 bulls ranging from calves up to mature animals sold for $6,210, or an average of $310.50 each. There were 50 cows and heifers that sold for a total of $35,640, or an average of $712.80. The highest priced animal in the lot was the four-year-old cow Maple Ridge Mabel 234333 with an official record of 7,045.5 lbs. of milk and 307.64 lbs. of fat in 315 days. She was consigned by L. D. May, of Bradford County and sold to the Otis Herd, of Ohio, for $2,100. Ten cows and one bull sold for $1,000 or above.

All but 15 of the animals sold were from Pennsylvania, and practically all of the lot were from Bradford County. They went to 30 buyers in nine different states. Among the heaviest buyers were W. A. Robinson, of Iowa, with 10 animals; L. J. Greenwald, of Minnesota, with seven animals; the Otis Herd, of Ohio, also with seven head; Geo. S. Taylor, of Massachusetts, with four; Simpson & Cary, of Vermont, with four; Sherwood Farm, New Jersey, and R. H. Feary, of New York, with three each. Thirteen buyers from Pennsylvania took 20 of the animals for further development of the breed in this state.

DAIRY CATTLE JUDGES

The following judges have been selected to pass on the cattle at this year's National Dairy Show, to be held at Chicago October 6 to 12.

Ayrshires—Prof. H. H. Kildee, Ames, Ia.

Brown Swiss—H. G. Van Pelt, Waterloo, Ia.

Guernseys—David Michie, Aylesford, Hants Post Office, Tishburn Park, England.

Holsteins—W. S. Moscrip, Lake Elmo, Minn.

Jerseys—Tom Dempsey, Westerville, O.

CORRECTION IN SHORTCAKE RECIPE

An error in shortcake recipe published in July 5 issue made it read 1½ cups sugar. It should have read ½ cup sugar. Sugar is getting scarce here and we can be saving. There is not much fruit in this section this year.—Mrs. S. R. Smith, Bradford Co., Pa.

WATCH FOR BOT FLIES

The bot flies attach their eggs to the hairs on the front legs and breasts of horses. These eggs open when moistened. They may be destroyed and the horses protected from the bots by wiping off the horse's front legs every few days with a cloth dampened in a 2 percent carbolic acid solution. It takes but a few minutes and may save the horse a lot of trouble and annoyance, as well as loss in feed bills.

McKean Co., Pa., (NC) July 7.—It is getting quite dry. Only two showers the past month. Quite a frost June 29; not much damage done but the cold nights with the dry weather checked the growth of the corn. Meadows are very weedy. Not as good crops of anything as we had last year. Many of the potatoes were planted very late. Oats have made very short growth. Haying commenced last week. Help is more plentiful this year. Apples will be a very light crop.—R. C. Fuller.

Cumberland Co., N. J., (S) July 7.—A much needed shower came last night. Wheat is harvested and mostly carted in; some has been threshed. A recent hard rain made wheat hard to cut. During the extreme heat some wheat was cut at night, by lantern light. Help hard to get. Early potatoes digging will commence the last of this month. A basket of tomatoes sold in Bridgeton this week for $6. Onions, $3 hamper.—C. J. S.

Corn Harvest Satisfaction

TO harvest corn with a corn knife means many men and much hard work and expense. Farmers of experience know the satisfaction of using a good corn binder. McCormick and Deering corn binders are built for such farmers.

Simple in construction, light in weight and compact, two horses will easily handle one of these binders in most conditions of corn, while a tractor or three horses give power enough to harvest 5 to 7 acres of corn a day, bind the corn into neat, easily handled bundles, and load them on a wagon to be taken to the ensilage cutter or husker and shredder.

McCormick or Deering Corn Binders

fortify farmers against danger of the loss of a part of the corn crop. A farmer need not worry about securing extra help, or paying high wages. He can be sure of having his corn safely harvested within the limited time in which the work must be done to get the full feeding value from the fodder or stover.

A nearby International dealer will point out to you the money and time saving features of these machines, or full information will be furnished by writing the address below.

The Full Line of International Harvester Quality Machines

Grain Harvesting Machines
Binders, Push Binders, Headers, Rice Binders, Harvester-Threshers, Reapers, Shockers, Threshers

Tillage Implements
Disk Harrows, Tractor Harrows, Spring-Tooth Harrows, Peg-Tooth Harrows, Orchard Harrows, Cultivators

Planting and Seeding Machines
Corn Planters, Corn Drills, Grain Drills, Broadcast Seeders, Alfalfa and Grass Seed Drills, Fertilizer and Lime Sowers

Haying Machines
Mowers, Side Delivery Rakes, Comb. Side Rakes & Tedders, Tedders, Loaders (All types), Baling Presses, Rakes, Sweep Rakes, Stackers, Comb. Sweep Rakes & Stackers, Bunchers

Belt Machines
Ensilage Cutters, Corn Shellers, Huskers and Shredders, Hay Presses, Stone Burr Mills, Threshers, Feed Grinders, Cream Separators

Power Machines
Kerosene Engines, Gasoline Engines, Kerosene Tractors, Motor Trucks, Motor Cultivators

Corn Machines
Planters, Motor Cultivators, Drills, Ensilage Cutters, Cultivators, Binders, Pickers, Shellers, Husker-Shredders

Dairy Equipment
Cream Separators (Hand), Cream Separators (Belted), Kerosene Engines, Motor Trucks, Gasoline Engines

Other Farm Equipment
Manure Spreaders, Straw Spreading Attachment, Farm Wagons, Stalk Cutters, Farm Trucks, Knife Grinders, Tractor Hitches, Binder Twine

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THE SELF-OILING WINDMILL has become so popular in its first four years that thousands have been called for to replace, on their old towers, other makes of mills, and to replace, at small cost, the gearing of the earlier Aermotors, making them self-oiling. Its enclosed motor keeps in the oil and keeps out dust and rain. The Splash Oiling System constantly floods every bearing with oil, preventing wear and enabling the mill to pump in the lightest breeze. The oil supply is renewed once a year. Double Gears are used, each carrying half the load.
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WANTED: Capable progressive farmer to operate farm near Phoenixville, first on salary, later on shares. Address Box 21, care Pennsylvania Farmer, Philadelphia, Pa.

Duroc-Jersey spring pigs at farmers' prices. Pedigreed and best of blood lines. SLATY RIDGE FARM, Box 5, Palmyra, Pa

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AMERICA'S GREATEST VALUE!
WHY pay more than Day-Elder prices for a motor truck when you can get at these prices ALL that any other worm-drive motor truck selling at several hundred dollars more can offer? *IT PAYS TO THINK!* Write for catalogues.
Manwaring & Goodman, Distributors of D-E Trucks **15th and Dauphin Sts., Phila., Pa.**
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JAS. L. EASTLACK, Richwood, N. J.
DRESHER MOTOR CO., Lansdale, Pa.
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Self-Filling Fountain Pen
Here is a Fountain Pen that not only will give long service but will meet with your approval in every respect. If found unsatisfactory, return it and we will send another to replace it.
This Self-Filling Fountain Pen will be given for a club of 3 subscriptions for the balance of this year and all of next or to Jan. 1, 1921 at 75 cents each, or with a single subscription and $1.10 additional.
PENNSYLVANIA FARMER, 261 South Third Street, Phila., Pa.

Warranted to give satisfaction.

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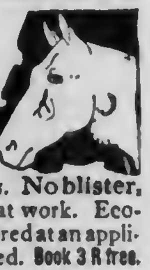
Curb, Splint, Sweeny, Capped Hock, Strained Tendons, Founder, Wind Puffs, and all lameness from Spavin, Ringbone and other bony tumors. Cures all skin diseases or Parasites, Thrush, Diphtheria. Removes all Bunches from Horses or Cattle.

As a HUMAN REMEDY for Rheumatism, Sprains, Sore Throat, etc., it is invaluable.

Every bottle of Caustic Balsam sold is Warranted to give satisfaction. Price $1.75 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars, testimonials, etc. Address

THE LAWRENCE-WILLIAMS COMPANY, Cleveland, Ohio.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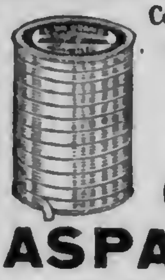
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IDEAL MEAT SCRAPS TRADE MARK

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WHY NOT LET THEM MAKE MONEY FOR YOU? There is absolutely no waste with the BLU-Bar Feeder. Write for descriptive literature and be convinced.

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ECONOMY FEEDER A perfect working self-feeder for hogs. A 100-lb. pig pays for it. Saves on purchase price, time, floor space, repairs and feed. Will feed 40 hogs. Sold direct, $18.50. Money refunded if not satisfied. For further information address, THE ECONOMY FEEDER CO., Box 436 New Washington, O.

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A Hitch in Time

I wish to add my mite of praise to the new development of draft horse efficiency thru the medium of the multiple hitch. "I have seen with mine own eyes" and that, in reality, is the only absolute way to become convinced of the practical utilization of this unique method of using the draft horse power that has been at least partially latent on the farms of America. We all know that wherever agriculture is pursued, there must be, of necessity, a certain amount of horse power on hand, no matter how many or how few tractors are in use. We cannot do all our farming, preparing the seed beds, cultivating the growing crops and harvesting the same without aid from "man's best friend"—the horse.

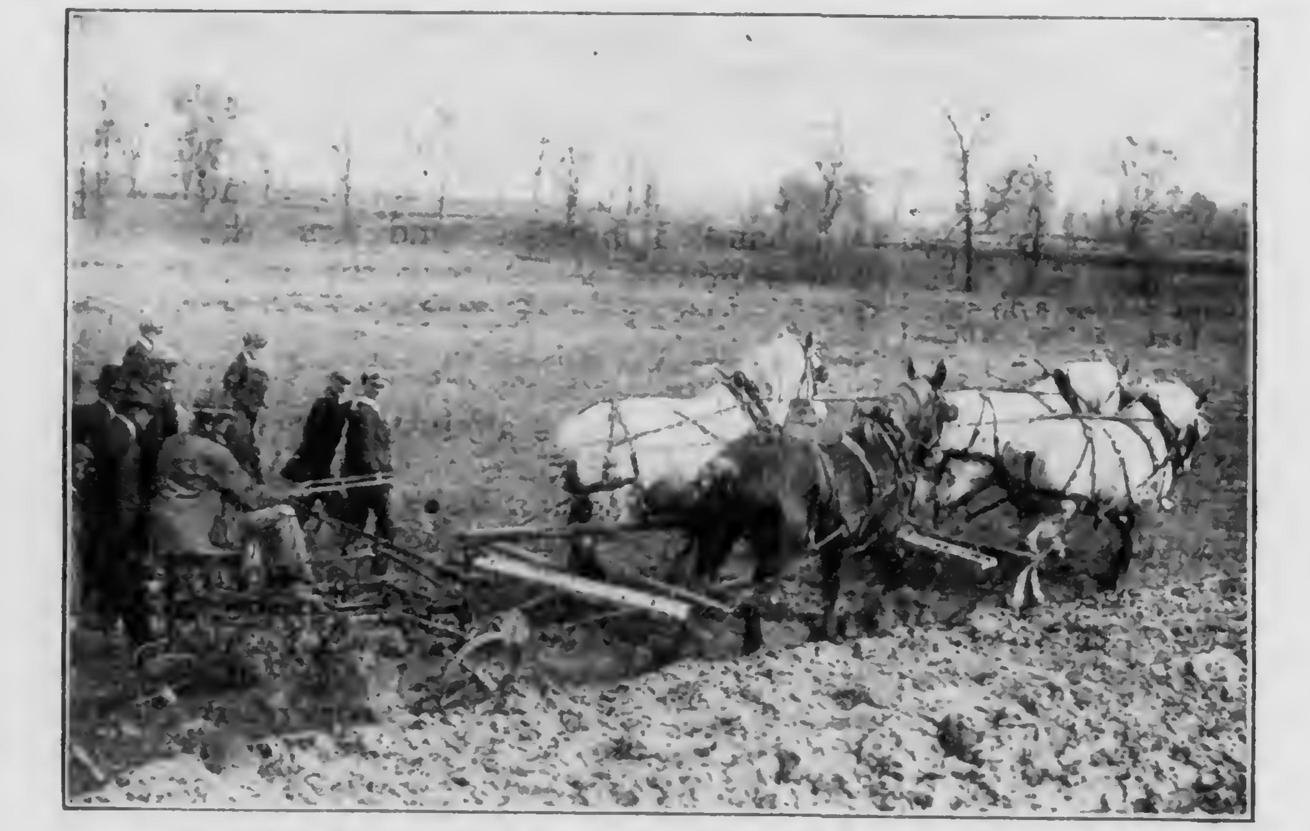
And now come Wayne Dinsmore and Prof. White showing us the way to utilize our horse power, so that we will not have to consult our banker and arrange our finances to purchase gas driven, instead of grass driven, power. The fact that the horse must be apart of every farmstead is undisputed, and now that we have been shown how we can economically utilize this power to do all our work, heavy or light, without additional expenditure, we are indeed in a fortunate position. The flexibility of the multiple hitch to suit any size field or any size farm is a great item.

When the idea was first broached to me, I was as skeptical as any doubter, but after seeing just what this hitch will do and using it as I have done on my own farm, I am thoroly convinced as to its practicality, flexibility and economical usage in our everyday farming by everyday farmers. The other day I stood watching one of my teams in the field, and when I noted the ease with which those six, big Percheron mares pulled that two-bottom, 14-inch gang plow, breaking a heavy clover sod, the thought came to me as to just what those six mares meant to me in a financial way, to say nothing of the pleasure of seeing and owning those good old brood mares. So I took out my pencil and jotted down a few figures that I can vouch for as being accurate.

The six mares that happened to be hooked that day had an average age of 11½ years, had been owned by me an average of 6 years, and their initial cost to me represented the sum of $3,317.50, or an average of $570 each. During my ownership of them they have produced offspring that have either sold for cash, or I have been offered cash for same, and have retained them for my own stud, to the amount of $8,685, or an average sale of produce of $1,470.83 per mare. I know that if I offered the six for sale tomorrow morning for $3,000 I would not have one left by nightfall, and I know that these faithful workers have more than earned their keep by their daily toil in the fields, to say nothing of the tons of manure they have produced to fertilize the soil of my farm.

The interest on my investment of $3,317.50 for these six matrons, at 6 percent for 6 years, amounts to $1,196.30. Deducting this from the $8,685 realized from the sale of their offspring, still shows a net profit of $7,489.70 or over $850 more than double the original cost of the mares. This does not take into account the show yard winnings of these mares or their produce, which amounts to several hundred dollars.

While I have had my "downs" and "ups" in the breeding game, losing foals, the same as other breeders do, from time to time, I cannot help but feel that I made a good investment, and now with the coming of the simplified hitch, I feel much more secure in my investment than if it were tied up in a gas power implement, that could neither produce foals nor fertilizer, while it was doing part of my work on the farm.—W. H. Butler, Ohio.



The White Multiple Hitch Gives a True Line of Pull Over a True Line of Draft With No Waste of Power

HORSE MARKET IMPROVING

Decided improvement in the horse market is manifest. Exports to Europe have already begun. One firm has forwarded three shipments to Harve, France, part of which were billed directly to Belgium via Harve. Vanlandengham, of Belgium, who formerly acted as interpreter for many Americans purchasing pure bred horses in France and Belgium, has begun buying horses on the Chicago market and expects to ship at least 100 per week. From the known arrangements of three exporting firms, from 400 to 500 horses will be purchased and shipped abroad each week from Chicago alone. St. Louis will undoubtedly be in the game soon.

The consignment of 200 head which left Chicago July 1st were a good useful lot of work horses, ready for immediate service. All were broken and most of them right out of farm work. They ranged from 15.3 to 16.3 hands in height, and from 1,500 to 1,800 pounds in weight, in good working flesh. The majority were geldings, but mares are just as acceptable, or a little more so. The best type of draft horses are wanted, but the less desirable ones are accepted at a discount in price. One buyer in commenting on this, said: "It is easier to sell a real good drafter for $300 than a mediocre one for $225."

The horse most sought for is the one that will stand 16.3 to 17 hands, with depth of chest equal to one-half his height, and well proportioned thruout. Such a horse must be strong backed, powerful in build, deep middled and well let down in the flanks, with good underpinning, and weigh over 1,700 pounds in working flesh. Such horses will bring from $325 to $350 each. Short, steep pasterns, small constricted feet or crooked hocks are not wanted, and unsound horses are also declined altho a slight puff about the joints will get by if the horse is otherwise sound.—Dinsmore.

All farmers may not know that restrictions as to the use of explosives for agricultural purposes have now been removed; this does not permit their use by enemy aliens, however, nor does it remove any former restrictions safeguarding their use.

Pinehurst Shropshires

Registered Flock established twenty-five years. Bred for TYPE, MUTTON FORM AND HEAVY FLEECES. Great prize winners. 1919 catalogue, price, breeding and description ready. Make choice early. There is big demand rams this year. In August will offer 25 select yearling ewes, 40 ewe lambs and 50 imported ewes.

HENRY L. WARDWELL
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OUR MOTTO—"Like Begets Like."

HEAVES Money Back If It Fails

A horse with heaves can't do its full share of work. Cure the heaves and you have a horse worth its full value in work or in money. Send today for FLEMING'S TONIC HEAVE POWDERS $1.04—war tax paid—per pkg.) Satisfaction or money back. Fleming's Vest-Pocket Veterinary Adviser. Helps you distinguish heaves from other ailments. Write for the Adviser. It is FREE.

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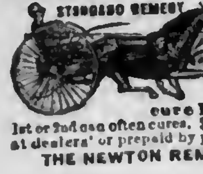
DEATH TO HEAVES! NEWTON'S HEAVE, COUGH, DISTEMPER AND INDIGESTION COMPOUND. STANDARD REMEDY. Cures Heaves by correcting the cause—Indigestion. Prevents Colic, Staggers, etc. Best Conditioner and Worm Expeller. 27 years sale. Three large cans guaranteed to cure Heaves or money refunded. The 1st or 2nd can often cures. $1.15 per can (this includes 6c war tax) at dealers' or prepaid by parcel post. Booklet free.

THE NEWTON REMEDY COMPANY, Toledo, Ohio

Poultry

HUMMER'S FAMOUS CHICKS famous because they live and grow. Special prices June, July and August.

	Per 100	Per 50
Bar Rock, big healthy fellows	$15.75	$8.00
R. I. Reds, Blue Ribbon stock	17.00	8.75
Anconas	20.00	10.50
Brown Leghorn S. C. Everlay strain	16.00	8.50
White Leghorn	14.00	7.75

We solicit your business on a square deal basis, live arrival, parcel post paid.
E. R. HUMMER & CO., Frenchtown, N. J., R. D. Y.

Ship Your Live Poultry and Eggs to a Reliable Firm

We get the best price for you and guarantee prompt returns. Ask the publishers of this paper or your banker as to our Financial Responsibility. Write for prices at once.
J. K. SCHULTZ & CO., Commission Merchants, 36 S. Water Street, Philadelphia, Pa.

LEGHORN CHIX hatched during July and August make good layers, the heavy breeds profitable broilers and layers. July and August delivery of day-old chix, W. & Br. Leg. $12 per 100; R. I. Reds, Brd. and W. Rks. $13 per 100; Buff Rks. and Opr. $15 per 100, by Parcel Post. 2 wk.-old chix $35 per 100; 4 wk. $45 per 100. Airdale pups for sale. Sunnyside Poultry Farm and Hatchery, Blanchester, O.

LOOK BABY CHICKS $12 A 100 UP

By Special Delivery Parcel Post, postage paid 20 different thorobred breeds. Utility & Exhibition grades. Live delivery guaranteed. Capacity 100,000 weekly. Catalog free. NABOB HATCHERIES, Gambier, Ohio

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Sore Eye.—Three-year-old draft colt had mild attack of influenza last November, made a speedy recovery, but some time ago one eye became sore and altho treated by local veterinarian is not yet well. This colt is now doing farm work. Seems worse in morning but eye clears some during the day. Has colt met with an injury or is it an affection of optic nerve? E. W., York, Pa.—I think the eye was injured. Dissolve a teaspoonful salt in 1 pint of clean water that has previously been boiled; then apply to eye twice daily. A bright light always irritates an inflamed eye. Let plenty of fresh air into stable. Keep his bowels open.

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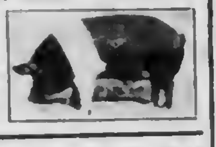
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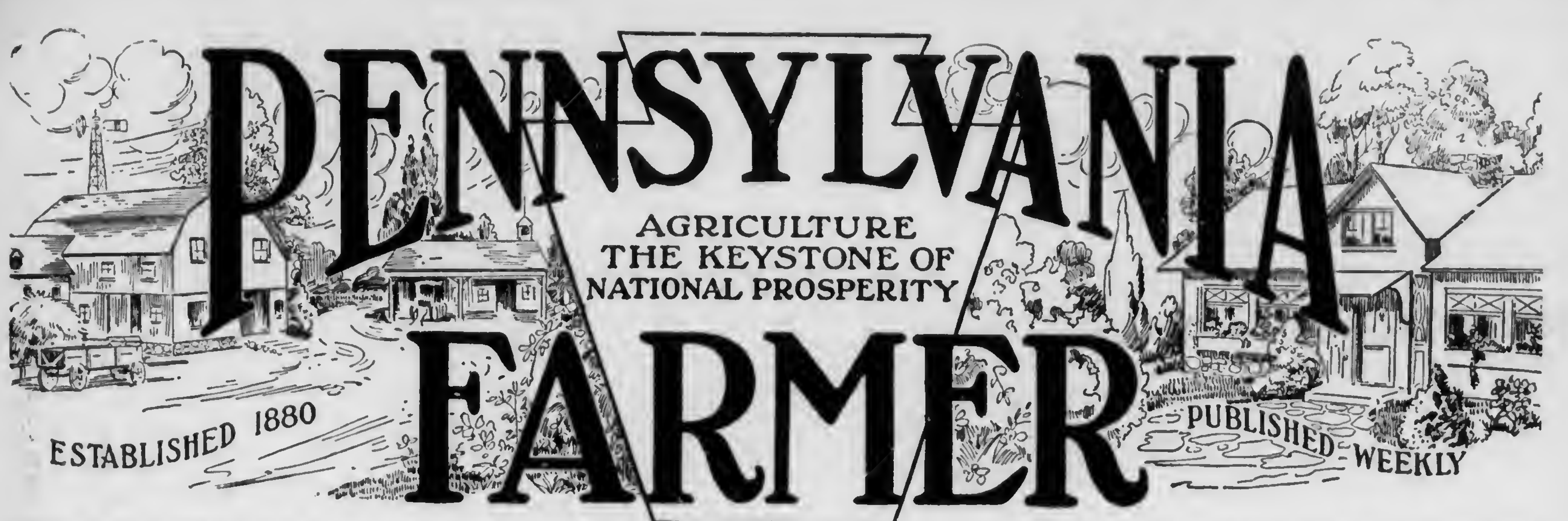
PENNSYLVANIA FARMER
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A Delaware County Awakening

Kent County, Delaware, Farmers Pointing The Way in Cooperative Organization

In many ways Kent County, in the little state of Delaware, is not unlike the average agricultural county in any of the middle Atlantic states. She has about the average quota of poor roads, and dilapidated country schools. About every so often someone is sold out by the sheriff. At intervals of two years the state legislature meets at Dover, the state capitol, and after much oratory, adjourns, leaving the good taxpayers to wonder what it was all about.

Such fame as may have come to Kent County in the past has been due to her yearly output of peaches, apples and tomatoes, which are said to excel in quality and flavor. Until recently the farmers and fruit growers have been content to produce their crops and market them in the time-honored methods introduced by their forefathers. They took their produce to the shipping points and the local markets and asked what it was worth. They loaded up their teams with supplies and repairs, asked what the charges were, and went home. The question of their margin of profit was not considered. If a man had a balance in the bank at the end of the year, well and good; if not, "it had been an off season."

That was Kent County, Delaware, last year and the year before, but things are different this year. While the citizens of Russia and Germany and some of the other highly "kultured" countries of the world have been engaged in cutting each other's throats, and the delegates at the Peace Conference have been monopolizing all the headlines in the daily press, the farmers of Kent County have been staging a little revolution of their own.

In 1918, County Farm Bureaus were organized in each of the three counties of Delaware. In Kent County, eighteen communities were organized, each with a local chairman, and a committee representing the several phases of farm and home interests was appointed. An Executive Committee meeting with the county agent each month, planned the program of work and looked after the business of the organization. This organization planned to have the farmers of the communities arrange their program of extension work, according to the need of each community.

As meetings were held from time to time thruout the county, farmers began to get better acquainted with their neighbors and their problems. Early in 1918 some propaganda was launched in the county to the effect that the government had set a maximum price of 35 cents per basket on tomatoes. The farmers held some meetings and figured up the cost of growing tomatoes. They found that 35 cents was not enough to meet expenses. More data was secured and the president and vice-president of the Farm Bureau went to Washington. They saw Mr. Hoover, and they saw their members in Congress, and the contract price of tomatoes was set at 50 cents per basket.

Threshing 90-Bu.-per-Acre Oats on Williamson Farm, Delaware Co., Pa.

When the membership campaign for the Farm Bureau was opened for 1919, that extra 15 cents a basket for tomatoes was a good object lesson and the membership increased 50 percent.

In January, this year, the tomato growers began to ask what they would be offered for tomatoes this year, and the canners began to answer with big talk about reconstruction, no sale for futures, high priced cans. They said that 25 cents per basket would be all they could pay. The farmers began to figure and called on the county agent to get an estimated cost of producing an acre of tomatoes in 1919. Figures taken from 50 average farms showed the estimated cost to be $102.34 per acre or about 36 cents per basket.

A Cooperative Organization

On February 12 the Farm Bureau called a meeting of tomato growers to discuss the matter. Over three hundred men attended this meeting, and it was pointed out to them that the Farm Bureau was essentially an educational body and could not undertake direction of commercial enterprises. The men were urged to go home and hold local meetings and organize local tomato growers' associations for the purpose of meeting their marketing problems, following the plan which had met with considerable success at Hurlock, Md.

After several local meetings were held,. a committee was appointed to decide on the best form of organization. An attorney was called in, and three days were spent in drifting articles of incorporation under the laws of Delaware, and in preparing a set of by-laws. The result was the Delaware Farmers' Cooperative Association, authorized to do business anywhere in the state of Delaware, as a non-stock-issuing corporation.

Under the by-laws adopted, each local association elected its own officers and a director to serve on the county board of directors. The executive staff of the county association consists of a president, vice-president, secretary, treasurer, a board of directors, and three executive members. This body is empowered to hire a county sales manager, and such local salesmen as will be needed. Each member joining the association pays a fees of 50 cents and gives a note for $50 without interest to the Treasurer of the association. This note is simply a guarantee of good faith. If the member violates his agreement to sell his crop thru the association, the note is forfeited, otherwise it is returned to him at the end of the season.

So far the action of the association has been largely educational among its members. They have been shown the cost of producing a crop, the value of careful grading and packing, and the neces-

Making Use of the Tractor in Rush of Harvest Season.

sity of cutting down their acreage this year to stabilize market conditions. Acting in conjunction with other associations in adjoining counties, the members have agreed not to contract tomatoes for less than $25 per ton or 41⅔ cents per basket. A recent survey shows that among members and non-members the acreage of tomatoes in Kent County will be cut down about 30 percent in comparison with that of 1918.

A bureau of information has been established, and each week all local secretaries will report local crop and market conditions, so that at all times managers will know what market conditions are in other sections, and can thus cooperate to avoid local glut.

In Kent County, the membership in the eight locals is over 800, and they are still joining. Volunteers have gone out to explain the details of the organization at school house meetings. The county agent has been kept on the run, supplying cost of production figures, and in the month of Februray alone was called upon to attend 24 night meetings. As a result of all this agitation, the men have studied the factors that are entering into their cost of production along all lines more carefully than ever before, and they are learning to apply the same business methods that others have been using.

The cost of operating the association will be met by a small assessment against each package handled for the members. In this they will be guided by the experience of the Hurlock Tomato Growers' Association, of Dorchester Co., Maryland. For the last two years this organization has made a charge of one-half cent per basket for marketing tomatoes, and at the end of the year has been able to rebate half of this charge back to the members, indicating that it has been able to sell the crop at the rate of a quarter of a cent a basket. Since the average broker charges from four to five cents per basket to handle tomatoes, it can be readily seen that this saving alone will amount to a substantial sum during the season's business.

As a further aid in their new venture the members of the associtaion will have the assistance of their new county agent, A. D. Cobb, who has just completed four years of experience with the cantaloupe growers' associations of southern Indiana, which are conducted on a very similar basis, and have proved a great aid in marketing this perishable crop.

Dairymen Organize

Organization among farmers in Kenty County has not stopped with the tomato growers, for the milk porducers in several communities decided that if organization was god for tomatoes growers it should apply to milk producers as well, and five locals of the Inter-State Milk Producers' Association have recently been organized, with a total membership of over 300 men representing about 2,500 cows.

At one point in the county the milk dealer decided to close his plant permanently, and move the machinery to another point. Some of the men were milking from 20 to 30 cows, and had no other outlet for their milk. An organization was hurriedly formed with the assistance of field men from the Inter-State Association. Pressure was brought to bear on the dealer, and the station was reopened, with the producers getting a better price than before.

Buying Supplies

In another community the men decided to buy their binder twine together. Local prices were quoted to them at 26 cents a pound. At the next meeting bids were read, quoting twine at 22½ cents per pound, and on the following morning the local stores displayed windows full of binder twine marked 22½ cents a pound. However the local dealer said he would not sell to an organization at any price, and turned down an order for over $2,000 worth of twine. The members tried to do business at home, but felt that after such treatment they were not bound to protect their local dealer.

In still another community there was a shortage of hay last winter. Thru their organization the members purchsaed a carload of hay of excellent quality, at a saving of $5.90 per ton, over what they could have paid as individuals.

It can be said that the farmers of Kent County are waking up. The fact that they have analysed their own business methods and found them lacking will be worth a great deal to them if nothing else has been accomplished. The real strength of their organizations however, lies in the fact that the men realize that they must have middlemen, and that prices depend on demand. They are not seeking to do away with the packer and the dealer, or to injure their business. But they do want to travel in the same road with the dealers not as a tandem team, but two abreast.

WEAK POINTS IN FARMING---II

The Farmer And The Government---By R. L. Scharring-Hausen

If we were to take the legislature of almost any Eastern State, or Congress itself, for that matter, and sort the members according to business or profession, we should find the great majority to be lawyers. The remainder would doubtless be professional politicians and business men. Perhaps we might find one farmer. Nine times out of ten this "farmer," if closely examined would fall under the class of "gentleman farmer"—a man who lives in the country and raises nothing but his hat!

"Business" is well represented, either directly or indirectly in these bodies, and the lawmakers have more or less insight into business ways. (This is not meant for sarcasm.) But the farmer is neither represented nor understood by the average legislator, and accordingly his interests suffer. Worse than this, the average city man is inclined to believe that a farmer knows very little about his own business, and feels that if he owned a farm, he could show him just how the job should be done. The only bright spot in this situation is found in the West, where the farmer's interests, thru the efforts of the Non-Partisan League, are being carefully looked after. The howl set up by "business" of "Bolshevism" is caused by the fact that the farmers have got hold of the government, and are giving others the dose that they have been compelled to swallow in the past.

The Newark, N. J. "News" recently published—much to the credit of the paper—a series of articles on the Non-Partizan League, showing its members to be substantial farmers, men of means—rather than the socialists and rabid anarchists who were supposed to fill its ranks.

But to stick more closely to the subject—a fine example of the way in which farming interests are handled by our lawmakers is the manner of handling the question of food production during the war. To "win the war" we needed ships, munitions, and food. Shipbuilding and munition making are manufacturing enterprises. The city mind could appreciate the problems involved, and so money was loaned, workmen secured and paid unheard of wages, and contracts awarded on the "cost of production plus a reasonable profit" basis—as was the thing to do. But the city mind did not know the problems of farming, so the farmer was told to be "patriotic" and raise more and bigger crops. No one said "cost plus" to him. His hired man went to the munition plant for wages no farmer could pay; his son was drafted, and the farmer took what labor he could get—the left overs, the old men and the boys, and the women—and produced. Fine patriotism, but poor business. We hear of no "war babies" that brought sudden fortunes in farming! The farmer simply did not get a square deal.

The Remedy—Political Activity

It is a common saying that the world owes every man a living—but that he has to collect it. And it is likewise true that the farmer is entitled to fair treatment, but that he will have to fight for it. No one is going to hand him favors and give him special consideration unless he is powerful politically. Now, it is a hard matter to farm and play politics if one is to be successful in both. That is why farmers are so poorly represented in lawmaking bodies—the two jabs don't fit; while lawmaking and other forms of business or profession may go very well together. But to secure laws that will serve his interests, the farmer must have representatives in state and nation that appreciate his problems, and that feel responsible to him. His vote must put country minded men in office, who know that not to serve his interests will lose his support. To accomplish this result, a strong political organization is necessary. In certain countries, the landed and agricultural interests form a powerful political party. It is doubtful, however, if there is room in America for a distinct Agarian or Farmers' party, or if either would be desirable. Nevertheless some sort of organization along political, if not party lines, that would insure the election of a desirable candidate to office, and maintain a strong influence favoring agriculture at Washington, is eminently desirable.

Under such conditions, it is conceivable that the Secretary of Agriculture, when asked to publish available cost of production figures on crops, would not say, "The farmer has no right to know the cost of production his business is to produce!"

It Pays to Use Enough Horses to Cut Steadily

SOIL ACIDITY

It is quite common to hear soil acidity spoken of as being due to "continuous cropping." However, one must go a bit behind this as an explanation in order to get at the real facts which usually result in producing a sour soil. The constant cropping of a given piece of land is accompanied as a rule by the repeated application of organic matter either in the form of farm wastes or in the way of clover, vetch or other crops which are plowed under. This organic matter undergoes decomposition. One result of decay is the production of certain acids. For a time these will be neutralized by alkaline substances which are present in the soil but there comes a day when these can no longer take care of the excess of acid and the soil becomes sour. The remedy, of course, is to apply alkaline agents which will overcome the acidity and return the soil to its natural alkaline condition. Lime in one form or another, is Nature's great corrective agent for overcoming soil acidity. Without it, cropping would lag or cease altogether, for the soil bacteria upon which so much depends in the way of converting soil elements into available plant food cannot work effectively under acid conditions. "Clover sickness," sickly and weakly crops on acid soil and so on, are visible signs that the bacteria at work in the soil have begun to go on strike.—Sylvanus Cobb Burt.

Farm Law Stories

A Little Point on Railway Law

Any farmer who has done very much, or any, business with the railway companies knows that if he orders goods to be shipped to him, and the sender does not pay the freight, the farmer must pay the freight before he can get delivery of the goods from the railway company, or, as the lawyers say, the railway company has a "lien" on the goods for the payment of the freight, and are entitled to retain possession of the goods until that freight is paid.

In the fall of 1917, however, I had a little experience along this line that raised, to me, an entirely new point, and one that seems of sufficient importance to call to the attention of the farming community.

In the instance which I mention, I ordered a piece of farm machinery from a manufacturing company to be shipped to me by freight; when I went to the station for the machine I found that there was $15 freight to be paid, and, as that was according to my agreement with the seller, I had no objection to paying the amount.

In order to be on the safe side, however, I looked the machine over before accepting it or paying the freight, and found that it had been damaged in transit to the amount of at least $20.

"Well, I see that you broke it up pretty well, the way your company does with about everything that is shipped over the line," I remarked.

"If the company has damaged your goods sue them and make them pay for it—I guess they're good for a $15 or $20 claim," said the station agent.

"That's what I'll have to do," I agreed, "for I've got to have the machine to use right away, and all I can do is to take it, get it repaired and then get after the railway company."

"That would certainly be the wisest course," declared the station agent, "so you can pay me the freight and take the machine."

"Pay you the freight?" I queried. "Do you suppose I am fool enough to pay you $15 freight when your company has damaged my property more than that? I'll take the machine and let the damage go against the freight as far as it will."

"You'll do nothing of the kind—that machine don't leave the company's property until the freight is paid," blustered the agent.

"And if it stays here until I pay the $15 it'll stay until you've learned better manners," I maintained.

"Talk enough," agreed the agent, as he locked the door of the freight shed and put the key in his pocket.

In this instance I was perfectly right, and had the law on my side for once, as it has been laid down by the Kansas, Kentucky, Massachusetts, South Carolina, Pennsylvania, Washington and other State Courts that if the buyer is to pay the freight on goods which are damaged by the railway company in transit, and the amount of the damage equals or exceeds the freight bill, the buyer is entitled to the delivery of the goods to him without paying the freight.

"When the damage equals or exceeds the freight," says one of the Courts named above, "the railway company's lien for freight is gone, and the buyer's right of possession of his property is complete, and he may maintain an action of claim and delivery for the property and for damage."

Now, if I was entitled to demand the machine without paying the freight, on account of the railway company having damaged the goods to an amount in excess of the freight, and the station agent refused to deliver my property to me without payment of the freight, which he did, was I in a position to sue the railway company for refusing to deliver my property to me and recover damages?

On this point the Courts have said "Yes" and the ground for this decision has been stated by the South Carolina Court in the following words:

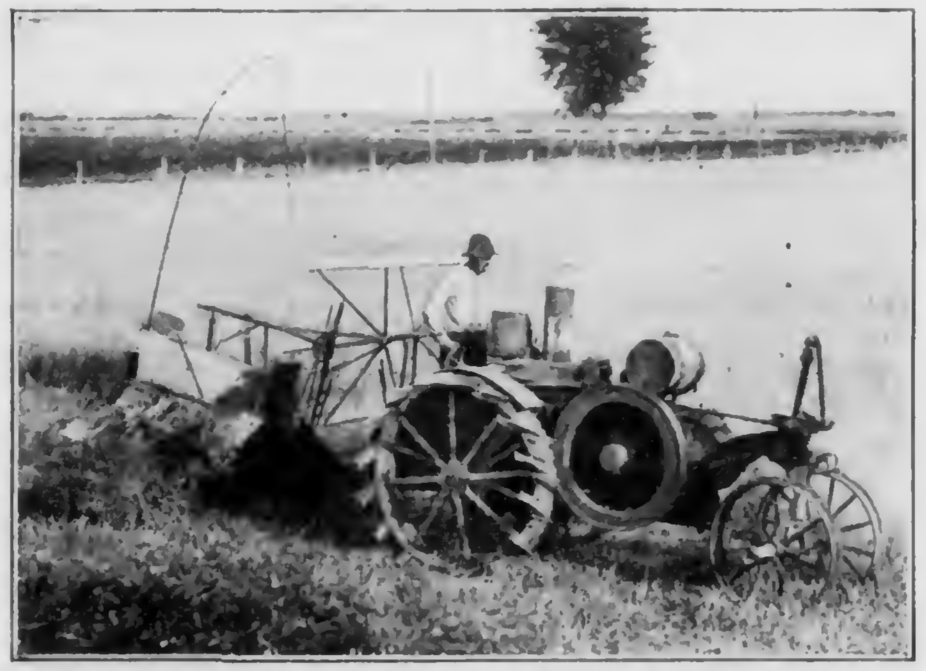
"If it can be shown that the railway company has injured goods of the buyer, to an amount greater than his whole freight, it cannot be pretended that the latter owes the company anything; and hence the buyer is entitled to maintain a suit against the railway company for the value of the goods which the company refuses to deliver."—A. B. Brown.

Bulletins For City Buyers

If the Department of Agriculture could cut out one of their bulletins on general information and substitute a collection of facts for city buyers of farm produce, it would be of great value to the farming business. Most farmers have been sufficiently bulletined but many city buyers lack a lot of information about the farming business that they should possess. The people existing under the head of "ultimate consumers" are a large factor in the farming business. They should know that farming is not a pastime like rabbit hunting or fishing but a business in which a man invests capital and labor with the hope of deriving a fair living from the profits.

Some buyers of farm produce do not know that farmers must have profits in order to do business. In the old days a farmer might exist like the squirrels who gather their food from the woods, but today a certain amount of cash is necessary for a farmer to fulfill his obligations to society. The church and the school need funds. The home that is a home requires a constant expenditure and many things are needed that do not come from the kitchen garden.

When city buyers are informed in this bulletin that farming is a business they should then learn how to buy farm products. City buyers can purchase eggs in the spring and place them in the water-glass solution and in the fall and winter they will have eggs that are better than the average cold storage stock and they will only cost spring prices.



Power That Doesn't Mind the Heat Nor Eat the Grain

The construction and use of cellars should be part of the city man's education. Then he can buy vegetables in the fall from farmers at wholesale prices and store them for winter use. Potatoes, onions, carrots, apples, cabbages, etc., can be bought for a moderate sum in the fall and the city man can reduce his annual expenses by purchasing a certain amount of farm products each year at wholesale from the farmer. The farmer is not equipped to store all of his produce and he cannot deliver it in small quantities. In addition, he often needs the money in the fall and so is compelled to sell much produce that he might wish to hold for higher prices. The bulletin should tell the city man how to use his cellar to the best advantage. It will be of much value in solving some of our marketing problems. Surely the farmers will be glad to give up the amount of paper in at least one bulletin per year so that it can carry a message to the city friends who are also helping to pay the cost of these bulletins. Farmers don't need all the advice that is handed out free in this country.

When a bulletin is issued on such a subject as canning it should be placed in more city homes. A community canning outfit can be used to advantage by the neighbors in a town even more easily than among farmers on the same road as the homes in the town are closer together. The increase in canning will benefit the farmer as it will increase the demand for fruit and truck crops. In some sections the farmers lose the profit that might be made on small sideline crops because there is little demand for them. An increase in home canning will make a better market in many districts for such crops as beets, tomatoes, small fruits, etc. Surely, the business of farming is connected very closely with the consumer of farm products and the city man occasionally needs a bulletin as well as his friend in the country.—R. G. Kirby.

To Kill Grasshoppers

How to Prepare Poisor Bait

Mix thoroly in a tub or half barrel, 20 pounds of wheat bran and 1 pound of paris green or white arsenic. In a separate receptacle, mix 3½ gallons of water with two quarts of molasses or syrup of a cheap grade. To this sweetened water add three oranges or lemons chopped fine. Add this mixture to the wheat bran and poison and mix thoroly. The poison bait is then ready for use. The mixture should be moist and crumbly.

The Poison bran should be sown broadcast like wheat or oats over the infested fields during the early morning hours. The quantity mentioned will sow from 3 to 5 acres, and usually it will kill the grasshoppers in from 6 to 48 hours after they have eaten the poison. It is often advisable to sow a strip of the poison mixture along the fence rows or weed and grass grown ravines from which the hoppers emerge during the morning.

The first sowing of the poison bait should kill from 60 to 80 percent of the hoppers present. Since the insects fly readily from one field to another, it may be necessary in some localities to sow the poison bait about every week or ten days until the pest is controlled. If the poison bait is properly prepared and sown, there is no danger of poisoning birds or live stock.

FIRES FROM SPARKS

Newspapers almost daily contain news items about dwelling houses, barns, etc., located near railways, having been set on fire by sparks from passing trains. The sparks lodge in shingles on the roof in most cases. When shingles become dried out, they contract; crevices are left between them into which it is quite easy for a spark to fall and ignite the wood.

Especially in hot weather is this true when the direct rays of the sun soon dry all the moisture out of the shingles making them easily inflammable. So great is the danger from this source that insurance companies have a very high rate for buildings that have shingle roofs and are located near railroads.

A large part of the danger of falling sparks can be eliminated by painting the roof with a fire retardant shingle paint, made especially to form a coating of mineral pigment over the shingle. The ingredients used in this roof paint are selected to reduce possibility of ignition to a minimum. The sparks falling upon the roof naturally then die out as they do not come in contact with any wood with which to ignite and there is little danger of the structure burning down. This paint should be used very freely, especially the first time it is applied, in order to fill up all crevices and completely cover all exposed parts of every shingle.

Soil moisture is the most important factor in crop production. Water not only acts as a food substance for the plant, supplying hydrogen and oxygen, but it is vitally concerned in the essential activities both of the soil and of the plant. It serves as a soil conditioner—giving a favorable physical condition—and regulates soil temperature. It is essential to bacterial life. It dissolves plant food and transports it to the plant roots. As the main constituent of cell sap it transports the plant food material within the plant and gives the plant turgidity, erectness and growing vigor. The control, conservation and use of soil moisture in growing crops includes the whole subject of soil culture and can not be given further attention hore. Keep moisture by cultivation.

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VOLUME 46 NUMBER 4

Our job is to serve our readers. Whenever and wherever we can help you, write us.—The Editors.

Disappointing Wheat Yields

FROM all indications at present the prophesied one-and-a-quarter-billion-bushel wheat crop will not be realized. Reports from practically all the wheat growing states indicate that it is not threshing out as expected, altho the general appearance earlier in the season was never better. The fly, rust, black stem, weevil, hot winds, etc., are some of the causes given for the disappointing yield. How much better it would be for the Bureau of Crop Estimates to refrain from talking bushels as soon as, or even before, the plants of a crop are thru the ground, and speak only of the acreage and general progress from time to time with comparisons with other years. No good purpose is served and much harm is done by publishing purely imaginary totals of crops which exist only in prospect.

The Guaranteed Wheat Price

LETTERS indicate that many farmers are at a loss to know why they do not receive what is generally known as the guaranteed price for their wheat. It must be remembered that the prices so named are the prices which the United States Grain Corporation will pay, or guarantee, for the wheat after it is delivered at the terminal market of the district. For instance, if the guaranteed price at a certain city is $2.26, that means that the farmer will receive $2.26 for wheat of a certain grade, less dockage, freight, and a reasonable commission to the dealer or miller who buys it, and the net price to the farmer in the vicinity of Philadelphia or Baltimore would probably be $2.10, or maybe $2.15.

Race track Gambling

MARYLAND continues to allow gambling at her race tracks. The better people have for years been protesting and endeavoring to have the legislature pass laws which would put the state on a plane with other states in this regard, but so far the Jockey Club interests have won out and this old-time form of gambling continues in Maryland. The Jockey Club people base their claims for continuation of gambling upon the argument that it is necessary to the race track and the breeding of good horses The falacy of this argument has been long exploded, since many states which long ago prohibited gambling have as popular races and as good horses as they have in Maryland.

The Maryland State Grange at its last session appointed an anti-vice committee to make a special fight at the next election. That is the place to begin in any fight against an institution which owes its existence to legal establishment and protection. Whenever the legislature of any state is composed of men who represent the best elements of the state instead of the predacious and vicious, it is easy to outlaw undesirable institutions, and we hope the farmers and other church people of Maryland may succeed in this matter. Gambling is no more necessary to the breeding and exhibition of horses than it is to breeding and showing of cows or chickens.

For Prospective Farmers

ACCORDING to a little booklet, "Forward to the Farm," recently published by Colonel Arthur Wood, Assistant to the Secretary of War, farming is the most desirable occupation in which a young man can engage. It would seem to be composed of two principle parts; profits and poetry. From it we learn that farming is no longer a laborer's work. Old back-breaking methods are obsolete. The farmer no longer follows a furrow the long day thru at the heels of a balky mule, but he uses a tractor and plows without any exertion. In advising the ex-service men to engage in farm work Colonel Woods says that every man falls into one of three classes: 1. Those who have worked at farming but have no capital. These can get $50 per month and board. 2. The ones who have some money but don't know the difference between a plow share and a whiffletree. Men in this class can get good wages while learning the trade, and go to an agricultural college in the winter and learn all about it. 3. Class three is those who have neither money or experience. These men can go west and get 40 to 50 cents an hour and board.

In spite of all the foolish and official advice that is being handed out about the advantages of farming as a business, it remains a fact that men are not rushing back to the farms and the labor question is quite as serious in many places as at any time during the past two years.

Shall We Import Potash?

THE potash situation in this country has reached a rather complicated stage and it is up to the largest users—the farmers—to discuss the matter and then impress their Congressmen with the conclusions arrived at. The question, boiled down, is this: Shall this country return to the pre-war practice of importing potash from Germany and (now) France, upon the same terms, if possible, as heretofore, which terms made it possible to buy it here at about $40 dollars per ton? Or, shall we develop a home supply by protecting the newly erected plants in this country by a licensing system or a high tariff rate, thus establishing a trade in home-made potash at about $125 per ton?

In the discussion of this question farmers are brought face to face with a political, altho not necessarily a partisan, question. It has been the policy of our government for the past half-century to protect "infant industries" by placing a duty on goods of foreign manufacture, altho letting importations of raw material come in practically free. In connection with the consideration of this policy with that of the potash question farmers should remember that, in the main, farm products are considered raw material, and also that the most of our reciprocity treaties are with agricultural countries. The question then for sane discussion and just settlement is: Is the position of agriculture in law and economics such that it can stand a tax of 200 percent on a necessary raw material so that a comparatively small home industry may be built up?

It is not our purpose at this time to argue the question, but simply to state it so that farmers may discuss it intelligently and be able to direct Congressional action as definitely and unanimously as they did on the daylight saving law.

Fair Profits Not Profiteering

FARMERS should feel no hesitancy in acknowledging the fact that there is now being enjoyed a degree of agricultural prosperity not experienced before in a generation. We have noticed a slight reluctance upon the part of farmers to say so publically, possibly from the fear that others might conspire to put an end to it. There is no need to be fearful on this account. In fact, the "others" have known it also and have far over estimated it. The casual observer traveling thru the country today can see that farmers' families, their homes and equipment bear evidence that there is more money than usual to spend, and too often jump at the conclusion that the high cost of living is due to the farmer's excessive profits. Granting that there is a greater degree of prosperity than heretofore it is far from true that farming, or any one product, has returned excessive profits. It may safely be stated that every other equally important business has returned far greater net profits during the past five years than has farming, in spite of the fact that the farmer has a greater moral right to big profits than any other business because his risk is greater. Let us acknowledge that farming is now on a paying basis, and at the same time see to it that prosperity is maintained by the enactment of just laws and the adoption of fair business principles.

A Horticultural Outing

THAT a true estimate of a country cannot be made by those who follow the beaten paths of travel was well exemplified to the horticulturists who availed themselves of the opportunity provided by the horticultural societies of Pennsylvania and New Jersey, July 9 to 11. About a dozen automobiles from different counties of Pennsylvania made up the party on the afternoon of the first day, taking in the noted vegetable growing section of Bustleton in Philadelphia county. The extensiveness of this work was a surprise even to the market gardeners of the party from other sections. When it is realized that land in this section is valued at $1,000 to $2,000 per acre and taxed accordingly, it is evident that more than ordinary business capacity is necessary to success. The excessively dry weather of the past six weeks shortened the crops in this section.

The trip on the second day was planned so as to pass thru the heart of the most extensive and intensive horticultural section of New Jersey. The time was spent in Gloucester, Camden and Burlington counties, viewing orchards of from one to 800 acres in extent, and vegetable interests of all descriptions. Space will not permit detailed mention of the different orchards. Suffice it to say that the visitors were amazed at the extent of the industry and at the thoroness and intensiveness at which the work is done. They who think that the most modern methods in cultivation, spraying and general orchard care are practiced only in the Northwest will find they are mistaken if they will take a trip thru New Jersey. Orchardists from this side of the Delaware, however, were of the opinion that most New Jersey orchards are planted too close for best results in the long run. Few men have sufficient moral courage to take out fillers soon enough. The orchards listed on this day's route totaled 5,560 acres.

By noon of the third day the number of automobiles had increased to 100, and the number of people to between 400 and 500. This and the following day were spent in the justly famed Monmouth County. This county stands in New Jersey as Lancaster County in Pennsylvania, and Los Angeles County in California, first place in the annual value of agricultural production. While the agriculture is a little more general in character, including fine crops of corn, wheat and rye, the county's greatest industry is horticulture, including market gardening. One of the most valuable products of this county is famously infamous Giant potato, and the large fields of this potato in the neighborhood of Farmingdale explain the existence of the fine country homes in that section, as the fine orchards and big gardens explain them in other sections.

Frequent stops were made during the trips and owners as well as experts from the Experiment Station explained methods of management and control of disease. One thing which struck the visitor was the enthusiastic spirit of New Jersey horticulturists, and another was the knowledge and application of up-to-date horticultural principles displayed in the appearance of field and orchard.

Such outings are to be recommended as the best kind of educational work. Altho the time for specific instruction is short during the journey, the actual information gained is greater and more helpful than hours of academic lectures in formal meetings.

HARRISBURG LETTER

The State's New Laws.—In another week the legislative period for 1919-1921 will be over as the time for Governor Sproul to dispose of legislation left with him by the general assembly of this year will expire on Saturday and the state government will then settle down to operate under many new statutes.. In the next few months half the departments on Capitol Hill will be changed in methods and personnel and opportunity given to apply some modern system to the generation—old ways of handling funds and business. Unquestionably, there is more concentration of power in the State government, but if it carefully collects the funds and does no injustice there will not be as much complaint with it as there would have been four years ago when the state had not experienced emergncies brought about by the war. The legislature goes on record as the first $100,000,000 session and the appropriations will be held below that figure.

The Appropriation Cuts.—Governor Sproul did not follow the legislature very closely in his action on the general appropriation bill, which some members thought was going to be approved much as it passed. The bill was a record breaker when it reached the governor's desk and carried over $44,500,000. Over a million dollars was cut out, the cuts being generally distributed instead of being placed largely upon a few departments, as has been the case in the past. The governor seemed to go the estimates of the department heads as to the least they get along on, just a bit lower. It is stated that while the reductions show money cut out of funds for vocational and agricultural education there will be transfers effected which will not hamper such lines of activity, while the $36,500 taken off the appropriations for agriculture are a shaving of money from each of the bureaus. Similarly the Auditor General, the Forestry Commission, the Public Service Commission and other branches got notice to get along on less money. The truth is that because of the times some of the estimates had been made a little high and the governor has ordered economy.

Archaic Provisions.—In this connection it is interesting to note that people who frame general appropriation bills cling to phrases and itemization that belongs to the eighties. When one gets thru with the appropriations made for the school system one can not figure out what it amounts to. There are apparent duplications and where appropriations are made to match federal aid there is nothing to indicate. Just exactly why the educational end of the bill can not be made to read like the clauses relative to Agriculture, Public Grounds and Buildings and Adjutant General not even the Capitol squirrels can say.

To Bump 2.75.—Indications are that the governor will await the action of Congress as far as possible within the limits given to him to act on legislation before vetoing the Ramsey bill to permit 2.75 beer. The governor is also said to be preparing to veto the bill properly when he does it. It was sent to him after he had repeatedly declared he would not sign it, the move being one of those which have characterized the liquor interests' handling of legislative propositions in which they had a hand for many, many years.

Township Reward.—Among the interesting bills approved the last few days was the new system for aiding townships for improvement of roads. This takes the place of the old bounty and bonus system. It is called rewards and gets away from the cash road tax proposition which cost the state much money and led to some peculiar gyrations during the last administration. Under the new system there will be one third paid on cost of roads and bridges according to a well established and well balanced scale. The bureau of township highways in the Highway Department will be in charge.

No Damages.—The Public Service Commission in deciding a Chester County case has enunciated an important principle in damages. Owners of a quarry near a crossing of a railroad which was ordered abolished claimed damages alleging that their business would be interfered with. The Commission finds that the safety of the general public rises above any man's personal interest and that the quarry not being adjacent to the land at the crossing the owners are not entitled to damages.

No definition Yet.—It is probable that within a short time that some definitions regarding rural schools and teachers salaries will be made. There is much uneasiness among rural districts as to what the teachers' salary raiser is going to cost and much will depend upon what the state authorities decide. The state will begin to distribute the money for school districts in a short time which will enable some of the districts to begin to figure on what they must do next year.—Hamilton, Harrisburg, July 21, 1919.

NEW YORK LETTER

Convict Labor Satisfactory.—Northern New York officials report satisfaction with convict labor used in road construction, and believe their experience would justify other states in making the experiment. Prisoners are well fed and housed, and appreciate the out doors air and are generally well behaved. Dannemora prisoners have been sent out for this work since 1917. Central counties are now trying the plan with good success. In the scarcity of farm labor, camps of these workers under proper supervision might be used for work on fruit and truck farms it is thought by some.

State Bureau Places Farm Help.—After a period of depression in the placing of farm labor, the Syracuse State Employment bureau is now having better success recently locating 45 men in one day. "Farmers Day" this week is expected to place many more.

Victory in Rural Mail.—The largest delegation ever sent from this state to Washington reports a great success in their hearing before the postal committee of Congress. The victory is mainly in the fact that Congress has learned that farmers demand a daily door service, and that in all matters pertaining to rural mail changes the patrons must be consulted. The outlook for improved service is bright and even the post office department at Washington was glad to have Congress learn direct from the farmers what their needs are as a guide in making appropriations for this service. The committee will extend an invitation to several of this delegation to appear in Washington at the fall session to argue before the committee in regard to the postal appropriation, discussion assured future understanding and good will between the farmers and Congressmen. Representatives were present from threo states. The farm bureau and daily paper service in behalf of rural mail routes will be continued as a means of securing future improved service at the doors of rural patrons.

State's Defectives Neglected.—At the laying of a corner stone in a series of buildings in Letchworth village which will make this the greatest institution in the United States for the care of the feeble minded, Governor Smith said that of the state's 33,000 mental defectives only 5,000 were receiving proper care.

Films Show Wool Production.—At the auction sale of the pooled wool of the growers of Tompkins County, and also at a similar sale in Essex County, the United States Department of Agriculture took motion picture films, to add to a series that will show the different stages of wool production and marketing.

Early Potato Prospects — New home-grown potatoes are just beginning to appear on the market at prices that, tho high, are tentative. They are retailing at 60 to 70c per peck, but that price can hardly hold as it was set by southern potatoes. According to reports from southern potato sections the crop of early potatoes was very short, and that of early state potatoes is from 30 to 50 percent reduced.

Success With Cabbage Plants.—A farmer near Cortland sowed 13 lbs. of late Danish cabbage seed this spring on one acre. He placed a modest advertisement with one of the farm papers of the state and has sold abogut $3,000 worth of plants at $2 per 1,000, most of them delivered by auto truck to nearby state points. He sold all of his own raising and secured all he could of other nearby growers. There has been a great scarcity of cabbage seed and of plants, with a lively demand. The season was a good one for the growing of healthy young plants.—F.

NEW JERSEY NEWS

Will Lime Jersey Soil.—The executive committee of the Mercer County Board of Agriculture has decided to carry on a lime campaign in the northern parts of Mercer County in order to show the farmers of that section its value. A meeting of the representatives of community committees of Harbourton, Lawrenceville, Pennington, Hopewell and Ewing was held during the week at the Pennington fire house and the following plan for the campaign was worked out. The members of the various community committees will be supplied with envelopes from the Mercer County Board of Agriculture and they will be distributed among the farmers in each community for the purpose of obtaining samples of soil from the fields on which they intend to apply lime. The samples of soil will be collected and turned over to the county board after which they will be tested to determine the amount of lime necessary on each field. Later, there will be an open meeting of the Pennington Grange at which there will be a demonstration of the testing of soil and reports will be submitted on each sample taken from farms in that community.

Want More Farm Workers.—Farmers in various parts of the state during the week reported a great lack of farm workers, and every effort was made to induce soldiers and other vigorous young men to take up positions that paid well along with keep. The State Department of Agriculture was informed of the serious condition of affairs on the farms, and is now aiding in the move to have city youths join the forces in the agricultural districts.

Big Wool Yield.— The Morris County Farm Service Exchange reports that it has on hand more than five tons of wool, about a ton and a half of which was clipped from a flock owned by Major Samuel H. Gillespie numbering 600 sheep. Some 200 of this number were bought by the Whippany River Club, when efforts were being made to aid war production in every way a few months ago. It was said by officials of the exchange that it was expected that before the end of the summer there would be a carfull of wool in the possession of the exchange. That it will then be graded, buyers invited to Morristown to make offers, and that owners of flocks will be paid according to the quality of the wool they offer. This exchange was opened in 1918 for the purpose of buying seeds and farm utensils in large quantities and thereby enabling the farmers in Morris County to secure these articles at a lower price than the regular way. Last spring, the exchange ordered more than $30,000 worth of farm supplies, such as seed planters, weeders, corn cultivators, hay rakes, mowing machines, hand and tractor sprayers, rakes, reapers and binders. They have been practically all sold, showing the popularity of the plan.

Damage to Apple and Truck Crops.—Much damage has been done to apple and truck crops in New Jersey by plant lice, and that considerable blight has appeared in apple and pear orchards which has caused a lowered condition of these fruits.

Fighting Japanese Beetle.—Farmers located in Burlington County have been waging a campaign against the destructive insect known as the Japanese beetle, and they have been assisted by the state and federal authorities with more or less success. The beetle has made its appearance in Cinnaminson, Delran and Chester Counties. With a desire to prevent the infestation of other parts of Jersey, the State Department of Agriculture is urging the farmers to get busy in the fight against the insect, and has given instructions as to what plan should be carried out in order to eliminate the pest.—Kelly.

DELAWARE NOTES

Cannery Prospects.—Canneries in Sussex County are being overhauled so they will be ready for the tomato season which will open in about six weeks. Prospects at this time are not encouraging to growers because the ground has been dry in some sections until the late rain, and some plants have died. The acreage this year is not as large as that of last season, because the canners in several sections have refused to pledge a price per basket. Since there are tomato growers' exchanges in almost every locality, it is believed that more than 50 percent of the yield will be placed on the open market. Growers in this section are much worried over the new disease which has attacked their tomatoes and is called the "Black Rot." The disease seems to start on the stem of the plants close to the ground and they turn black and the plant is severed. The rot works rapidly. At first it can scarcely be detected, and occasionally the plants are found to be rotted off and the top remaining green and aparently in a living condition. The disease is causing great damage, as there is a small acreage planted. Growers are trying to reset plants where the rot has done the most damage. There has been great difficulty in getting new plants.

The Potato Crop.—Potato growers out of Georgetown as far as Franklin City, Va., are busy getting out the crop, and train loads are being shipped daily from that section to Philadelphia and New York. Thirty and forty cars pass thru Georgetown daily. Growers of potatoes for winter are planting more than four times their usual acreage. Many of them did not get very much out of the early crop which was damaged by the dry weather. Some large growers already have been offered good prices by speculators for their winter potatoes, but none of the offers have been accepted.

Raise Pork.—M. C. Vaughn, Sussex County agricultural agent is appealing to the farmers to engage in pork raising on a more extensive scale in order to solve the high cost of living.

To Try Cooperating.—Farmers in Georgetown district will try as an experiment this year for the first time the cooperative plan of marketing tomatoes and other produce sent out in car-load lots. Heretofore, there was no cooperation and the result was a variance in the price obtained by farmers who, in some instances, were neighbors. This year they will work in unison and demand a unit price whenever the members of the association place their produce in a car, either for sale in the open markets of Philadelphia, Baltimore, New York or Wilmington, or to brokers at the station. The plan, it is believed, will revolutionize the produce business in Sussex County if carried out by the different organizations organized some time ago.

Fruit Notes.—The blackberry and huckleberry season is about over. A few of each are being shipped daily, and continue to sell at the station at from 18 to 25 cents a quart. The yield of both fruits was cut short by the dry weather, but prices which have been unprecedentedly high, more than made up for the shortage.

A few peaches are being shipped to the city markets and indications are now that they will demand a high price all the season thru. Most of the apples shipped from here and other sections of the county are Yellow Transparents. The price has reached $2.50 to $2.90 a bushel hamper. Despite the price, the demand for those apples is great.—Karl P. Thompson, Del.

BOOK NOTICE

Moore and Halligan's Plant Production. By Ransom A. Moore, Professor of Agronomy, the University of Wisconsin, Madison, and Charles P. Halligan, B. S., Professor of Landscape Gardening, Michigan Agricultural College, East Lansing. Cloth, 12 mo., 428 pages, 210 illustrations. Price, $1.44. American Book Company, New York, Cincinnati, Chicago, Boston, Atlanta.

The plan and scope of the book are such that teachers in vocational schools and in all kinds of high schools, junior, regular and senior, will find that it can be readily adapted to local and seasonal conditions.

Farm Products Prices and Prospects

APPLE CROP PROSPECTS, JULY 1

Eastern States

The crop thruout the Eastern States has shown a considerable decline over the prospects June 1. The most marked decline has been in the New York crop which now promises to be not much more than one-third of last year. The Virginias are showing up fairly well and commercial production is now indicated at 15 percent less than last year. Very rainy weather during the blooming season, followed by excessive hot weather during June, has caused a heavy drop and favored severe infestation of scab thruout the Northern States. The crop for New York and New England is now estimated at 63 percent of last year.

New York.—The New York crop now promises to bo 30 percent or 46 percent of last year. The commercial production for the state is estimated at 2,712,000 barrels or 15,067 cars as compared with 5,950,000 barrels or 33,056 cars last year. The best conditions are found in the Hudson Valley where the crop is around 45 percent. The Western New York apple crop is now estimated at 26 percent or 1,664,000 barrels as compared with 4,800,000 last year for this same district. Wayne, Monroe, Orleans nnd Niagara Counties each show a condition of 27 percent while Genessee, Ontario, Yates and Seneca show a condition of less than 25 percent. There was a fine bloom early in the season, but the cold rains and very unfavorable and changeable weather prevented proper pollenization and the drop has been exceedingly heavy. Spy, Baldwin and Greenings are all very light in most cases. Dutchess, Twenty Ounce, King, Russett and Wealthy are in a much better condition, altho they also run less than half a crop. Early apples which originally promised to be a fairly full crop in Western New York will now not exceed 40 percent. The crop of winter apples around Hilton, one of the heaviest production centers, will not exceed 15 percent of a crop or 20 percent of that of last year. Niagara County reports a severe infestation of scab and the same is true of Orleans, Monroe and Wayne, so that the crop promises to be of inferior quality. In the region of Medina and Albion, only a few well cared for orchards have good crops. Many of the orchards in Yates County are almost a complete failure, and the same is true of many parts of Ontario.

New England.—The New England crop promises to be considerably better than last year and all reports from heavy production centers indicate a large crop on well cared for orchards. The crop in Maine is showing up fine and promises to exceed the 1918 crop by 406,000 barrels. It now looks as tho Maine would ship around 3,511 cars as compared with 1,256 cars last year. In the heavy production centers in Oxford County it now appears that the crop will be four to five times that of last year. York County has not much more than half a crop.

In New Hampshire the gipsy moth has done a great deal of damage and the crop has been cut to 60 percent of a full crop. In Massachusetts well sprayed and cared for orchards have in most cases a very good crop, while neglected ones are very light. It is expected that this year's crop will exceed that of 1918 by 20 percent.

Shenandoah-Cumberland District.—The Shenandoah-Cumberland District, extending from Staunton, Va., to Harrisburg, Pa., including the most important producing counties of Virginia, West Virginia, Maryland, and Pennsylvania now promises 50 percent of a crop as compared with 65 percent of a crop last year, or 2,200,000 barrels compared with 2,600,000 barrels, a shortage of 400,000 barrels over the crop of 1918. Frederick County, or the Winchester section in Virginia, promises about 48 percent of a crop, while Berkely and Jefferson Counties, W. Va., or the Martinsburg district, which produces most of the West Virginia commercial crop, promise about 44 percent. Washington County, Md., has about 40 percent of a crop while Franklin and Adams Counties, Pa., have between 50 and 60 percent of a crop. However, down the valley in Augusta County the crop will be short, altho better than last year. From Staunton to Winchester, Stayman and Winesap generally speaking will not run over 50 percent. They are very scabby and probably will not pack out over 40 percent No. 1. Yorks are showing up much better than the Winesaps, and are fairly clean. The drop is entirely over thru the important Shenandoah-Cumberland district and if conditions continue favorable the remaining fruit may tend to increase the estimate for this district.

New Jersey now indicates a condition of 65 percent as compared with 70 percent on June 1. The crop is very good in the southern counties and on the whole the production of the state promises to about equal that of last year. New Jersey leans strongly to the production of early apples. The movement of these has already begun. The crop of early varieties will run around 200,000 barrels, most of which will originate in Burlington, Monmouth, Camden, Cumberland and Gloucester Counties.

Delaware. The crop in Delaware this year now promises to be about 60 percent, of which about 400,000 five-eighths bushel baskets will be made up of late varieties compared with 140,000 baskets of late varieties last year. The early apple crop will probably run something over 300,000 baskets or nearly 70,000 barrels as compared with 140,000 barrels last year. The early apple movement began about July 1 and will reach its crest about July 15.

Pennsylvania now reports a condition of 47 percent as compared with 62 percent last year or 80 percent of last year's crop. The crop in most of the sections of Pennsylvania is light, with the exception of the counties included in the Shenandoah-Cumberland district, which promise better than half a crop. These counties comprising Franklin, Adams and York are the most important of the Pennsylvania commercial counties. Commercial production for the state is estimated at 892,000 barrels as compared with 1,116,000 barrels last year and 1,898,000 barrels in a full crop year.

SPECIAL POTATO REPORT

The Bureau of Crop Estimates issues the following report on the late or winter commercial potato crop of the United States, based on conditions July 1. The following comments referring to the late or winter potato crop are in the nature of a preliminary survey of the condition of the commercial crop at this time. It is too early to make any reliable estimates on quantity, but the following comments should serve in a general way to indicate the relative commercial crop as compared with that of a year ago in the important states producing late potatoes for the commercial market. The acreage in nearly all states is from 5 to 10 percent less than last year. Hot, dry weather has injured the crop in many parts of the country and potato bugs are generally reported to be much worse than usual. (We print only a few state reports.—Editors.)

Maine.—The total commercial potato crop in M[illegible]ne, from present indications, is likely to be from 8 to 10 percent less than in 1918. Aroostook County, the leading county in potato production in the United States, will run about 7 percent less in commercial acreage than last year. The yield in the commercial regions of the State of Maine last year was around 200 bushels. Acreage for the entire state will probably run around 100,000 acres as compared with 112,000 acres last year.

New York.—The commercial potato acreage in New York at present promises to be about 6 percent less than last year and fully 6 percent less than the usual acreage. The heaviest producing center of New York is in Long Island, altho western New York and the region about Lake Champlain also grow thousands of carloads for the commercial markets. Weather conditions have not been very favorable and bugs are reported much worse than usual. High cost of and lack of labor at planting time is the reason generally given for the decrease in acreage in nearly all the states.

New Jersey.—The acreage of commercial potatoes in New Jersey is somewhat less than last year and the condition is only fair. The stand is uneven and the seeds germinated rather poorly.

Pennsylvania. — The commercial potato acreage in Pennsylvania has declined in all sections of the state. Strictly commercial areas have fallen from 2 to 3 percent. Conditions so far have been favorable. Germination was poor, stand is irregular and bugs have been very plentiful.

Ohio.—The acreage of commercial potatoes planted in Ohio this year is about 93 percent of that of a year ago, and about the same percent of the usual acreage. From present indications the yield per acre promises to be about 85 percent of normal.

WINTER WHEAT REPORTS

These reports throw some doubt on the billion-and-a-quarter bushels wheat yield:

Delaware.—Septoria blight, scab, rust and smut have all tended to seriously reduce the fine conditions; yield will generally be very much less than expected and generally disappointing.

Maryland.—Many reports coming in of rust, smut, scab and septoria blight causing shriveled grain and considerable deterioration in condition. Grain which has already been threshed is disappointing in yield per acre and in quality.

North Carolina.—Constantly proving less productive than expected.

Ohio.—Harvest nearing completion. More smut and scab found in scattered instances than was anticipated. Much difficulty is being experienced in harvesting lodged grain.

Wisconsin.—The hot weather [illegible]ded this crop in maturing and the heads are filling out very nicely. Will be ready to harvest considerably earlier than usual.

Iowa.—Much damage reported especially in the southeastern section due to scab. Damage by lodging has been great. Cutting is in progress in the southern section.

Nebraska.—Many yields disappointing ranging from 60 percent to 90 percent of what was expected. The mature grain shows shrinkage probably due to several causes as red rust before heading, lodging, some insects and fungous diseases. There was some black stem rust. Ripening too rapidly may also have caused shrinkage.

Kentucky.—Filled poorly in most sections. This is charged to rain at blooming time, scab, rust, spring freezes, etc. Yield per acre probably three bushels less than expected. Some wheat lodged too badly to harvest.

Tennessee.—Very little threshing done yet as farmers are trying to get their crops cleaned before starting to thresh. All reports indicate a poor yield.

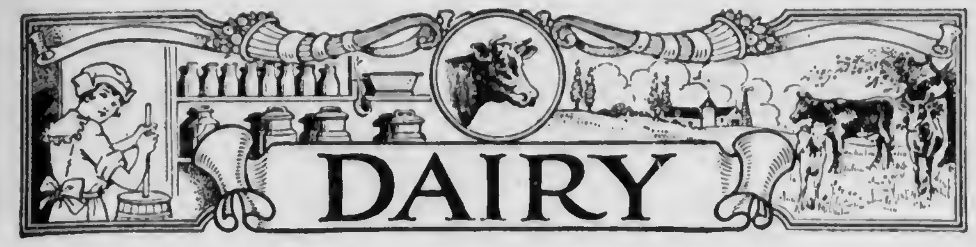
Mississippi.—All in shocks; being damaged by rains. Other crops and labor shortage prevent threshing.

Montana.—Much of crop is a complete failure and entire acreage including irrigated will not produce more than quarter crop. Some harvesting already done with yields running from two to eight bushels.

TOBACCO PLANTS SUFFER

According to State Inspector Wm. J. Frere, the Maryland tobacco acreage will not come up to the original plans of the growers. During the planting season in the early spring there was much wet weather, this was followed by very dry weather and caused many plants to die. The farmers have put other crops on this land. Those near canneries have planted sugar corn, others field corn, cowpeas, soybeans and late potatoes.

The greater portion of the 2410 hogsheads of tobacco that was shipped abroad in the last two weeks was consigned to Holland. The French Government has much tobacco stored in Baltimore. Tobacco growers are growing less dependent on this crop and are finding that other farm crops often pay and so they are planting them.—Marylander.



Is In-Breeding Dangerous?

I have noted reports of the efforts of some scientists in animal breeding to find out the effects of a somewhat continued experiment in inbreeding as shown in the progeny after several generations. These results were to be contrasted with a line of open breeding, where there was a continual introduction of outside and unrelated blood. Guinea pigs were taken, the experiment being conducted for eighteen generations, and in every way conditions were to be as nearly as possibly alike with the two colonies of guineas.

In Lot No. 1, no fresh blood was to be introduced, the only precaution being to keep the colony down to twenty. The idea was to mix up relationship to a point of actual disappearance, and watch what the effects of blood amalgamation would have upon form, vitality, size and other characteristics. Lot No. 2 was kept within the same average number of twenty, but unrelated mates were introduced with each generation or two. At the end of the trial, experts were called upon to score the two lots. Judges were asked to tell wherein the inbreds had fallen below the other group, and if inbreeding had caused any loss of size, symmetry, vitality, or imparement of constitutional vigor, or had developed weakness, as compared with the other group.

To the surprise of all, the inbred group seemed to have held its own, and if any defections were there they were very slight. In a majority of points they had held their own with the other group, showing that after 18 generations of inbreeding "pigs were still pigs" and nothing of moment had been proved against the most intensive inbreeding.

Now all this is about pigs, which may or may not have a bearing upon the breeding of dairy cows, and their development for milk production. Is it injurious to inbreed or line breed dairy cattle? Who has indisputable proof that it is? Facts bearing upon this point can be found near the writer's home, where a herd of Holstein cattle numbering close to 100 head has been intensely inbred for over ten generations—22 years in fact. The head of the herd is the father of this herd, over and over. Not a drop of outside blood was ever introduced into the herd on either side, and the old sire, at 24 years, is still in service. A finer herd cannot be found. The cows are large, smooth and symetrical. The vitality is unimpared and there is apparently absolute freedom from the general diseases of stock.

This is a difficult thing to explain away! The females of this herd seem to be greater milk producers with each generation, and this has never been approached by any other herd, however bred. Ten of these cows at different times on a full year's test have passed the 1,000 pounds of butter fat, notwithstanding they are five times over half sisters to themselves, and all sorts of relations to all the other members of the herd.

What would have been the result if in the guinea pig experiment only one male had been allowed? Would not the law of averages combined to give a steady improvement of the pigs, as it did in the case of the "Butterboy" Holsteins? The unexpected appearance of "sports" will account for how and then a wonderful exhibition of dairy performance, but so far as we can learn a half score of world's record cows in a half dozen years in one herd is a trifle out of the ordinary. It is something that the opponents of inbreeding will have to explain away. It brings to mind the saying of a great English breder. When asked why he did not take measures to improve his herd he replied: "When you have got the best there is, where are you going to get anything better?" This man was a most noted inbreeder of his stock, and carried out this principle of intense inbreeding for more than 20 years. By these methods he founded a breed of stock that has maintained its individuality to the present day.

The finest breed of horses ever known in America is the Morgans. It is now discovered to be so valuable that the Government is annually spending thousands of dollars trying to reunite some of these almost obliterated blood lines into a possible recreation of the breed coming down from old Justin Morgan. Again there is a possible hint to the dairy breeders of this country. Pigs may still be pigs, but great dairy prepotency was never established or maintained except thru well considered inbreeding.—Chas. Mathew Morgan, Ohio.

Farmer Boys in Judging Contests at State College Farmers' Week

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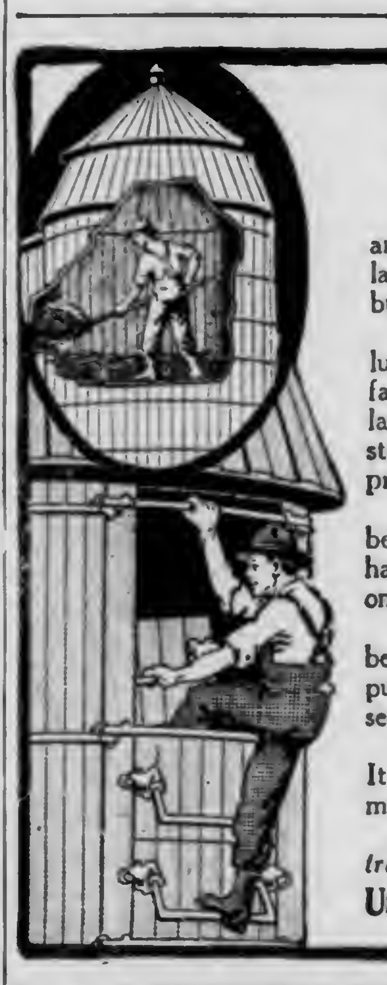

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A NEAR CHAMPION

The cow shown in the acocmpanying cut is another possible Pennsylvania champion. Paulin Mable Maid, is owned by R. G. Williams & Son, Bradford Co., Pa. As a three-year-old she made a seven-day record of 32.63 pounds butter from 752 pounds of milk. In a 30-day test she made 132.6 pounds of butter from 3,152 pounds of milk, or an average of 105 pounds of milk per day. During her best day Pauline Mabel Maid produced 116.5 pounds milk and for 7 of the days under test she produced 770.4 lbs. milk. Up to the present time she has made three records before reaching the age of 4 years and these show an average production of 636.9 lbs. milk, which is believed to be a world record. She is sired by a 32-lb. son of King Segis Pontiac Alcartra.

Pauline Mable Maid

COUNTY JUDGING CONTEST AT FARMERS' WEEK

Eleven teams of boys representing ten counties matched their wits in a judging contest at the Summer Farmers' Week at State College, June 18. The team idea was a new one for Pennsylvania contests, but it met with much favor both with the boys and with those in charge of the contest.

The counties competing were:—Susquehanna, Cambria, Tioga, Blair, Center, Clearfield, Columbia, Crawford, Indiana and Wyoming. Many of the team members had taken part in previous contests at local fairs and some were students of the vocational schools. The work of the teams was consistently good thruout. The contest will probably be a regular feature of farmers' week in the future and many counties that did not enter a team this time are planning to do so in the next contest.

The Pennsylvania Bankers' Assocition, thru its Committee on Agriculture, presented a beautiful silver trophy to be competed for five successive contests. It will become the permanent property of the county whose team wins it the most times in five contests. Attractive ribbons were also awarded to all members of the five leading teams. The teams holding the five high scores were as follows:—

Susquehanna County — Miller Lewis, 369; Howard Benning, 338; Kenneth MacConnell, 366; Frank Wilmarth, 275; Rupert Grant, 344. Team score—1,692.

Cambria County—Wm. Gooderham, 296; Norman Griffity, 323; Wayde Bloom, 359; E. Karlheim, 329; Isadore Karlheim, 345. Team score—1,652.

Tioga County—Milton Hubers, 358; Lewis Wood, 292; Horace O'dell, 329; Orrie Cumming, 370; Owen Jenkins, 302. Team score—1,642.

Blair County—Michael Bechtel, 275; Clair Kauffman, 329; John Metzker, 288; Geo. McKerihan, 300; Clifford Honsaker, 323. Team score—1,506.

Center County—Geo. Ellenberger, 276; Jesse Gray, 301; Malcolm Musser, 315; Glen Wasson, 322; Everald Townsend, 282. Team score—1,496.

DAUPHIN COUNTY TESTING RECORD

The Dauphin County Cow Testing Association for second month shows 15 cows out of 335 tested giving over 40 pounds of butterfat and 14 cows producing over 1,000 lbs. of milk for the month. The leading cow was owned by Mr. Edward Swope. She produced 1,409 pounds of milk, testing 3.9 percent, which makes a total of butterfat of 54.9 pounds. The herd having the highest average fat production was that of Robert H. Bell. The number of cows in his herd is fourteen. The following table gives names and records of the cows in the Association which have produced more than 40 pounds of butterfat.

Owner of Cow	Lbs. Milk	Test	Butterfat
Howard Speece	1188	3.90	46.3
E. B. Mitchell	1189	3.50	41.6
Dr. Kirkpatrick	1257	3.20	40.2
Dr. Jesse Lenker	1357	3.60	48.8
Edward Swope	1409	3.90	54.9
Edward Swope	1238	3.40	43.3
S. T. Witmer	1351	3.30	44.6
Irwin Curry	1290	3.20	41.3
Irwin Curry	1159	3.60	41.7
Irwin Curry	1208	3.60	43.5
W. Hower	1189	3.50	41.6
John O'Nael	1043	4.20	43.8
A. B. Shenk	900	5.0	45.0
Wm. H. Peters	1220	3.60	43.9
Ed. Shutt	1025	4.40	45.1

EXPERIENCE WITH SUDAN GRASS

A few years ago we procured a small quantity of sudan grass seed. A trial plot was seeded on May 1 and another sometime in the latter part of May. The early planting did not make much growth until the soil got warm. It was not much if any ahead of the later planting. Then a larger plot was planted July 1. This planting was in a deep sandy soil, only moderately fertile. It grew right off and matured seed.

Last year I planted sudan grass with cow peas, hoping that the sudan grass would hold the cow pea vines off of the ground. This planting was about June 10. This mixture was a failure as the cow peas crowded the grass so that but little of it headed out and what did was much later than it would have been if it had been sown alone.—A. J. Legg, Nichols Co., W. Va.

FEEDING THE SILAGE CUTTER

Always feed the silage cutter evenly. Try to keep it well filled at all times, but do not over-crowd it. Over-crowding of the machine almost invariably means breakages, as it throws an extra strain on the entire cutter. Jerky feeding, however, results in a poor quality of cutting. When the cutter is kept continuously filled all of the corn is properly held in place by the rollers and the result is clean cutting. Anyone will readily understand that if the machine is not thoroly filled, the tension on the rollers becomes lessened. A certain amount of the feed is dragged thru by the knives and escapes being cut.

HORTICULTURE

HORTICULTURAL QUERIES

Answered by Dr. P. J. Stewart.

Deterioration in Sweet Cherries

"I have a number of cherry trees, Sweet Hearts, along the fences and there is a lot of wild cherries sprung up along the fence nearby. Our sweet cherries are not as nice as they used to be and are more bitter. Do you think it is caused by the wild cherries growing nearby and, like pollen on corn, cause them to mix and deteriorate? I think the wild cherries come in bloom a little later than the tame cherries."—W. W. R., Hundington County, Pa.

I do not think that the apparent deterioration in the sweet cherries is connected in any way with possible pollination from the wild cherries near them. If the wild trees are having any effect, it is doubtless thru competition with the sweet trees, much on the same plan as weeds affect the potato crop. The wild trees are a nuisance anyhow, as they are a harbor for all kinds of pests, some of which may be affecting the sweets, and hence it would be well to get rid of them in any case.

Another probable cause of deterioration in the sweet fruit is the general ageing of the trees, as most fruit tends to run smaller as the trees grow older, and this may also affect the quality, especially in those cases in which the fruit is already near the minimum in size. The principal methods of keeping the size up are by renewal pruning, thinning the fruit, and conserving the moisture. The latter is acomplished hy frequent cultivation, mulching, and avoiding undue crowding among the trees themselves.

Soil Management in a Young Orchard

"I have 1100 apple trees, planted in April, 1915, Winter Banana—Wagener, McIntosh Red, and Delicious. Have kept orchard in clover each year, starting with mammoth two years, and alsike two years. Trees are set 20 feet apart. Location, side hill, southern exposure. Have fine crops of clover each year and trees have made great growth. Have had some fruit from each variety and this year will have to thin, as many trees have much more than they should be allowed to mature.

The problem is, shall I cultivate and keep clean or use a clover or alfalfa sod? It has occured to me, that I might get the orchard set with white clover, mow several times a season and leave clippings on ground, as one does with a lawn. Have inquired on all sides for information but no one seems to have had any experience along the line I have in mind."—S. L., Bradford County, Pa.

The method of soil management now in operation here is evidently proving a success in the orchard concerned, so it would certainly be inadvisable to make any sweeping changes. One need not be afraid of continuing a relatively permanent leguminous cover, as some of the best orchards in the country are being run on this basis, and some of them are only in grass. The side-hill location of the present orchard also makes frequent tillage very inadvisable.

I would suggest that the needs of the trees be made the first consideration in every respect from now on, and that the making of hay be restricted to the central portions of the interspaces only, or be omitted entirely whenever it seems to be drawing too much on the trees. The remainder of the grass or leguminous growth should be clipped as often as needed and be left where it falls, as a mulch. White clover, alsike, and alfalfa are probably as good as anything one could use for a cover of this kind and a mixture of all three should be very satisfactory. The use of these plants, with about three or four clippings per season as needed, should give entirely satisfactory results under the conditions described.

Various Peach Problems

"Our peach season will start in about ten days now and I am expecting about 3,000 bushels. Am hoping for a good price as this is our first year to have a good crop. Trees were loaded with bloom and set a big lot of peaches but a great many of them, when they were about ½ inch in size, simply dried up but did not fall off. Some twigs and small branches are lined with these peaches and wherever they are the wood near them and sometimes the whole branch dies. It's a new trouble to me. Could it be brown rot in the wood? Looks like a blight of some sort.

What do you now think of dusting machines? Am afraid I am going to need another spray outfit another year as it takes so long now to go over the orchard that we can't get the work done in time. Have been wondering how a duster would do for codling moth and curculic and brown rot.—E. D. M., Maryland.

The trouble described may be due to brown rot. This fungus often attacks and kills the blossoms, and then runs down the flower stalk to the wood and forms a canker which may partially or wholly girdle the limb. When the latter occurs, everything above the girdle on the same limb naturally withers and dies. If no borers can be found in connection with the trouble, it is quite likely that this is the cause in the present case. The same kind of girdling sometimes occurs at the base of a brown-rotted fruit which mummified and remained attached to the twig over winter. The usual spraying treatment for this fungus, and the prompt removal and destruction of all such mummies, are therefore the only corrective measures that we can suggest at present for the trouble described.

In regard to planting on tight, wet soil, I would suggest that if lime and drainage are available without too great expense, they might do the work more effectively and permanently than the course of green manuring suggested. They should also enable the trees to be planted by next spring and thus avoid the loss of time. The green manuring could then be run along with the trees which should be most effective, and both trees and manures should be benefitted by the lime and drainage. I would at least give this plan careful consideration before adopting some other course which increase expense and further postpone returns from the proposed orchard.

In regard to dusting, it seems that at least some people are finding it reasonably satisfactory on the peach, and it will also protect the apples

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Our SEMI-SOLID BUTTERMILK is the only buttermilk on the market that you can drink yourself or use to make batter-cakes for your table.

Iowa Agricultural College, Ames, Iowa, fed two groups of hogs, same number, same litter—record per 100 lbs. gain in weight.

	Days	Corn	Meat Meal	Wheat Middlings	Weight
No. 1	218	442 lbs.	33 lbs.	31 lbs.	298 lbs.
No. 2	156	148 lbs.	9 lbs.	14 lbs.	299 lbs.
Gain or Saving	62	294 lbs.	24 lbs.	17 lbs.	3 lbs.

No. 1 had no butter milk. No. 2 had all they would drink. You can do as well or better.

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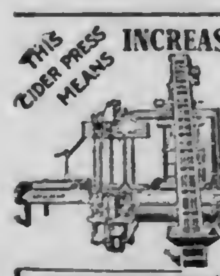

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For August and Fall planting. Runner and pot-grown plants that will bear fruit next summer. Raspberry, Blackberry, Gooseberry, Currant, Grape Plants, Fruit Trees, Shrubs. HARRY A. SQUIRES, GOOD GROUND, N. Y.

under moderate conditions of infestation. It is much more costly for materials, however, and will not displace the wet sprays entirely, so that it is quite likely that the present situation could be better met by simply getting another spraying outfit. The development of quicker methods of loading and the substitution of spray guns for the ordinary nozzles will also assist greatly in reducing the time required to get over the orchard.

TIMELY TRUCK TALK

By R. W. DeBAUN.

Beans and Peas

Peas were a very light crop this spring but the prices were good. Just the opposite conditions prevail on string beans; the yield and quality were excellent but the prices were very low.

Peas cannot stand hot dry weather. The last planting in the spring should seldom be after the first of May south of Philadelphia and then the soil should be quite heavy and the seed should be placed in furrows so that the roots will be well down in the cooler soil. North of Philadelphia the last date for planting peas may be set a few days later than May 1st.

A Good Tomato Crop at the Height of the Season

One of the greatest sections for the growing of peas during the entire summer is around Morrisville in the central part of New York State. Within a radius of ten miles they have six or seven canneries, and besides that they ship out several hundred thousand bushel baskets of peas every season. Transportation facilities are making it possible to distribute produce over a wide territory so that each locality should grow those things it is best fitted to grow and let someone else grow these things on which we loose money.

String beans can still be planted without much danger of their being caught by frost. Perhaps the late crop will pay for the money lost on the early plantings.

Harvesting Sweet Corn

There are two very distinct methods of harvesting early sweet corn or sugar corn. The method used around Philadelphia is to cut the corn with a sharp knife. It leaves a smooth and neat appearance when the corn arrives at the market. As the corn is being cut each of two cutters take two rows at once. A large box on a one-horse dray is drawn between the rows to receive the product picked from the four adjacent rows. When the end of the row is reached the box dray is usually pulled into the shade of a tree where the ears of corn are carefully packed in ⅝ baskets or counted and placed in bags for distant shipment.

In northern New Jersey and Long Island sweet corn is never cut from the stalks; in fact cutting is an unheard of practice. The product around New York City and Newark, N. J., is puled from the stalks with a quick downward twist to one side. By pushing on the ear in rather an undescribable manner the experienced "corn puller" can break the shank of the ears at just the desired length. The most desirable length is as short as convenient and yet maintain a coating of very green leaves over the ears. Small, early corn is pulled with a longer shank to make it look larger than it really is. Usually, the ears are thrown into the trucks without containers. The sides are ranked up so that many thousand ears are loaded onto truck.

BEST WAY TO WATER THE GARDEN

The question of irrigating the vegetable garden, especially in cities and towns where the use of water is more or less restricted, is of considerable importance at this season. The main point in such irrigation is to supply a proper amount of moisture with the least work possible.

It is often the custom for city gardeners to water the garden with a hose. This is not satisfactory in many cases, however, due to the fact that sprinkling must be continued for a longer time than many imagine, in order to wet the soil thoroly, and in a very short time the plants need to be watered again. The water so applied usually penetrates only to a slight depth, which encourages the vegetables to form a shallow root system, which allows them to be quickly affected by dry weather.

The best way to irrigate plants is to make a shallow furrow just to one side of the row and run a stream of water in this. The water from the hose may be allowed to run into a furrow across the ends of the rows and led into several irrigation furrows at one time. If the nozzle must be left on the hose, as is usually the case, the water may be discharged into a wooden box or old gunny sack to prevent splashing, and then led into the irrigation furrows. The water should be allowed to run for a sufficient time to wet the soil thoroly. This may be determined by digging down for a few inches.—Colo. Agr'l College.

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ARMOUR FERTILIZER WORKS
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CEREAL SPECIAL No 1 FERTILIZER
GUARANTEED ANALYSIS
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MORE and better wheat per acre and lower cost of production per bushel make bigger wheat profits certain. Cut the cost of producing wheat by using fertilizer specially prepared for wheat to suit your soil.

Feed your wheat crop just the plant food that it needs and what the soil lacks. Too much of one element and not enough of another is waste. Armour's Cereal Special Fertilizers supply the proper balance of plant food and prevent waste—make bigger yields and better quality—cut the cost per bushel and insure bigger wheat profits.

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Armour's Cereal Special Fertilizers fill every wheat need—quickly available ammonia, to give the young plant a good start and a strong, healthy root growth before Winter—sturdy, vigorous plants that are ready to grow as soon the ground warms up. Two per cent of ammonia is enough. It is not practical to use less than two per cent of ammonia and not necessary to use more.

—plenty of phosphoric acid to strengthen the straw, fill out the grain and ripen the crop early.

—sufficient potash to help the phosphoric acid to plump the grain and make it heavy. *You pay the thresher by the bushel, but you sell by weight.*

Armour's Cereal Special Fertilizers supply the proper balance of plant food for wheat from the very best materials, prepared to fill the needs of the wheat crop and what the soil lacks.

Specialized Wheat Formulas

On sandy soils — use Armour's Cereal Special Fertilizer No. 1—2-10-6.
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If you have a heavy clay soil which you know can supply the necessary potash use Armour's Cereal Special Fertilizer No. 4—2-12-0.

Armour's Cereal Special Fertilizers are concentrated to the highest practical point, so that the plant food cost will be as low as possible; they are made with the best materials adapted to the special needs of the wheat crop; they are manufactured by the latest and most efficient methods, in modern factories, under the supervision of trained men.

The Armour reputation for efficiency is world-wide. "Saving everything but the squeal" is an Armour proverb. No business is conducted on a more narrow margin of profit, with a greater degree of efficiency or with a higher ideal of service than that of the Armour organization.

It costs the same to manufacture, batch, pile, store and cure—and for bags, bagging, freight and hauling—a ton of low grade fertilizer as a ton of Armour's high grade fertilizer. It takes two tons of low grade fertilizer to equal one ton of high grade fertilizer. When you buy Armour's high grade mixtures you save this unnecessary expense.

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See our local sales agent NOW; have him reserve your Fall requirements. Ask him for a copy of our booklet "Turning Fertilizer Dollars into Wheat Dollars" or write direct to our nearest office. Don't delay—wheat seeding time will soon be here.

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At present prices your straw stack has a known fertilizing value of $8 a ton. In addition, it is the best builder of humus you can put on your soil—it prevents soil washing and blowing—and as a check to the winter killing of wheat it is almost invaluable.

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The NEW IDEA Straw Spreading Attachment almost doubles your spreading profits. It gives you two machines that can be changed from one to the other in a few minutes' time by one man.

Few Parts

The Straw Spreading Attachment consists of two framed sides which rest on the sides of the regular spreader—an upper, or third cylinder with a chain to connect it with the upper cylinder of the manure spreader—and plates to hold the cylinder frame in place. Bearings are self-aligning. A metal shield around the ends of the topmost cylinder prevents straw from catching in shaft.

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If you already have a NEW IDEA, get the Straw Spreader Attachment and put it on yourself in 15 minutes—the cost is small and the returns will be big. And if you haven't a manure spreader, get the NEW IDEA combination for spreading both straw and manure.

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The NEW ID
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spreads wide.

SCOOP up a handful of soil from your fields. Here is the stuff on which depends your success as a farmer — or your failure. Suppose this soil could talk to you. Suppose it could make known its needs. The first word of its cry would be "FOOD." Food, as you have your food — not just once a year and then no more. But regular, even feeding that enriches every atom of every foot of soil on your fields.

The cultivated soil of this country as a whole is slowly but surely starving. It needs nitrogen, potash and phosphoric acid — and it needs them badly. Every crop raised helps to drain the soil of these elements. They must be renewed. Or gradually the soil becomes poorer, crops weaker, and profits go steadily down.

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You realize this, undoubtedly. But thousands upon thousands of farmers do not. They pile manure beside the barn and let it lay with its hundreds of dollars in soil food leaching away. Or they burn it. Yes, burn this good crop nutriment as though it was worthless trash.

And there are countless others who know that manure is their greatest ally, **but fail to use it right.** They broadcast it from their wagons—a haphazard method at best. Or they dump it in piles, and later scatter it about by hand—unevenly **and unprofitably;** one part of the soil is over-fertilized and the next one is starved.

The Wealth of Stable and Barnyard

Stable manure represents fertility which has been taken from your soil and which should be returned quickly—before the liquid, which holds five-eighths of the rich nitrate plant-food, is lost. Farm thrift demands—and fullest farm success depends—on this. For no other fertilizer has such power to restore starved soils to productiveness and lasting fertility. Fresh manure, properly applied to the soil, adds humus—improves texture—increases water-absorbing and water-holding qualities—makes it warmer and more friable. When utilized with the scientific care it deserves, because of its great value, it guarantees bumper crops and bumper profits, year after year.

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Registered U.S. Pat. Off.
The Original Wide Spreading Spreader

If you think that scientific manuring doesn't pay—and pay big—it's because you've never used a NEW IDEA. Get one now and begin top dressing your corn, alfalfa, clover and grasses. Better yields this year alone will more than pay for it. And you need not be afraid of plant-breaking and burning. The big steel distributor wheels pulverize the manure so thoroughly that it cannot injure even the most tender of young growths.

Note how the NEW IDEA spreads—a full seven feet wide—laying a thin blanket of finely-shredded manure on every square foot of ground covered.

Note how low down it is. This means easy loading. Fill it 30 inches high and your team can handle it on any ground. The NEW IDEA has a solid bottom with chain conveyor that carries every scrap of manure to the distributors. And the control lever is right at the seat for five changes of feed—spread 3, 6, 9, 12 or 15 tons to the acre, as you wish.

The NEW IDEA SPREADER is **made right—and is guaranteed to work right.** It has more special features that appeal to the practical farmer than all other makes combined. See your dealer—he will show you. Or if you don't know who handles this spreader, write us and we will be glad to tell you.

But by all means, don't go on wasting the precious plant-food in your fresh stable manure. Don't continue starving your soil and robbing your own pocket. Get a manure spreader. Any manure spreader will pay you well—will prove a good investment. But if you want the best investment—if you want the spreader that will give you the most **profitable results, the longest service, and the greatest saving of labor**—then get the NEW IDEA,

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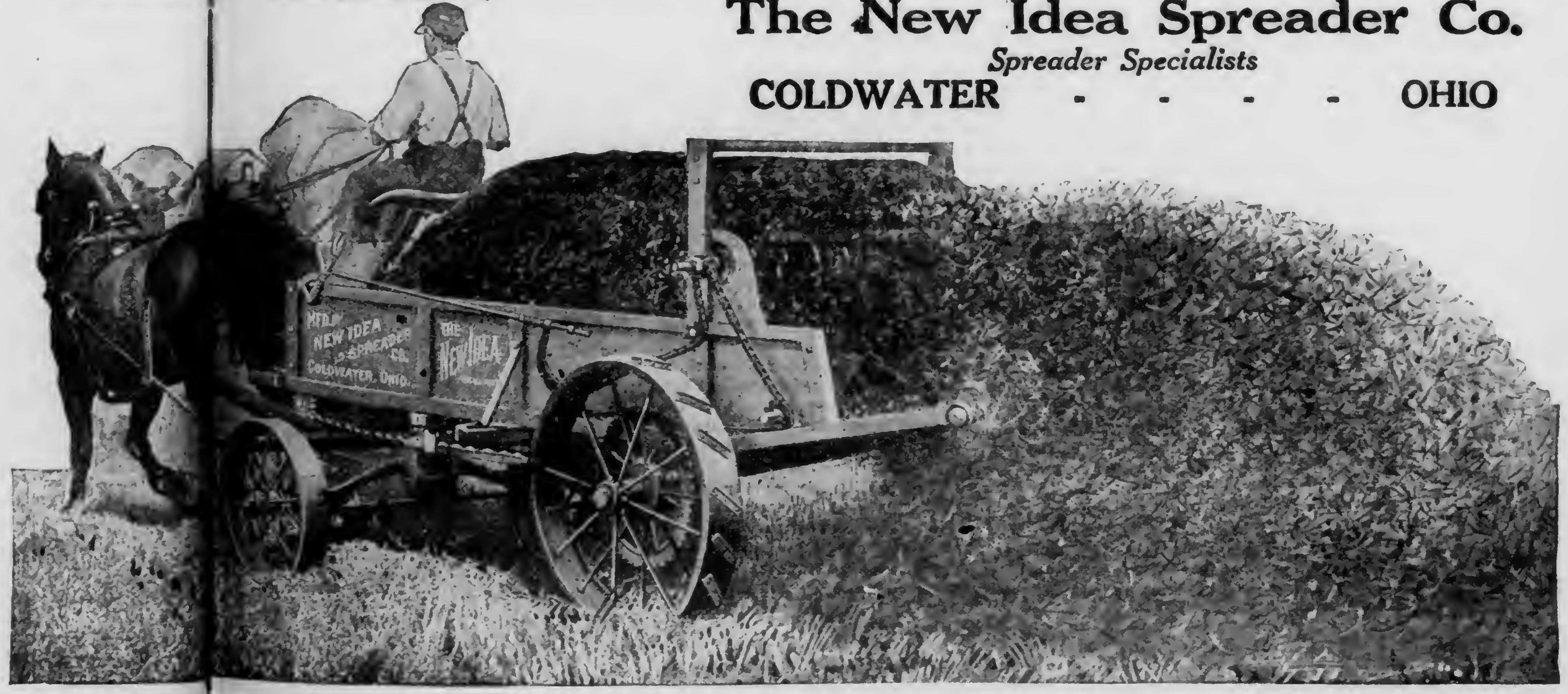


Making Our Furniture "Do"

How Some Ideas And Some Work Have Brought Good Results For Us

Many women have to, don't they? How many women, with the exception of the very rich, have their ideals expressed in their home furnishings? My husband's home had been kept for him for years before I came to live in it—kept well and faithfully by a devoted older sister. In actual needs there was nothing lacking. There was much that seemed very worth while to me, tho everything was very inexpensive. My husband had to work long hours and very hard, too. We wished to lay aside a little every month, and we wanted also a piano, guitar, books, magazines, a swift little roadster and many things else. So I thought it was up to me to make the best of the furnishings at hand. I rather like some of these makeshifts, and I want to tell you how I brought some of my belongings into harmony.

Forgetting Two Doorways

I have two paintings that were my grandmother's. These are both autumn scenes in soft colorings. The workmanship of these old pictures is very excellent, and with their good old-fashioned gilt frames, they would give charm to any dwelling. My living room and dining room are connected by a little side entry, with stairs facing its outer door. So I have had all these rooms, including hall and entry, papered just alike. This conceit has a space-giving effect that is well worth trying in tiny country cottages. The paper on these walls was selected to harmonize with my two old paintings. It has a somewhat rough surface, and is colored like the faded glories of fallen autumn leaves; backed by a creamy tan color there are leaf-like blendings of very dull red and green, copper tints and yellow—makes me think of the piled-up leaves thru which we used to "scuff" in childhood days to hear their rustling. There is an inconspicuous gilt stripe.

The larger painting has a canvas background in wood brown as a part of the frame. The border of my wall paper is in shades of wood brown, and is placed its width below the molding, which is of copper and gold and is placed close to the ceiling.

Notice the ridges in the wall of the corner where the settee stands.

Drape For Narrow Doorway and the Old Sideboard

There was originally almost no wall space in the living room. Two doors opened in the corner you see in the first photograph, one into the kitchen, into which one had to look directly when entering the front door, the other into a bedroom that opened onto the kitchen. The other members of our family hated to have these doorways closed up entirely for fear of future need for them, so we compromise by boarding them over with plaster board. The effect is not as good as it would have been to get rid of them entirely, but the idea is not bad, and we now have a cozy warm corner close to the register, which is much appreciated during the winter.

The tete-a-tete lounge just happened to be upholstered in copper damask, gray-figured. The pillows are dull blue and copper with the exception of my Cornell pillow. Really they are not, either the pillows or the lounge, the glarings things they seem in the photograph.

What We Did to the Doorway Corner

Drapery For Narrow Doorways

The openings into the entry from both living room and dining room were far too narrow for fabric portieres and too wide to look cozy without any draperies. I solved the problem to my satisfaction with wall paper beads. After rolling the beads I gave them a coat of orange shellac, which brought out marvelous colorings of copper, leather tints, and dark rich hues. Stringing and drapings the beads added much to their charm. Glass bugles, with an underlay of copper giving a metalescent effect, were interspersed with amber and black round ones. The draping is spiderwebby, and graceful. A chair-high shelf extends the whole length of the end of the dining room, and windows at each end and across its length some time must have given good light and warmth to many house plants. Now this shelf is a window seat, home-upholstered in brown burlap, to which a pillow or two of the same material has been added.

How I Managed the Old Sideboard

I did so want a buffet. I didn't see how I was to replace the ornate, carved and curlycued monstrosity of a sideboard. It just had to be. So I had to hit on a plan that makes this big, ugly piece of furniture a secondary thing, so that callers exclaim: "What lovely dishes!" The platter and two plates on the top shelf, marine views in blue and brown, are regular little paintings in themselves. Mother W's old blue dishes I rescued from the ignominy of holding food to be warmed-over, or kept warm until the arrival of a late diner. The big deep dish, their mate, I found in the attic. It held catnip for the cat! The pewter teapot and peacock pitcher were hidden away, forgotten with some fine old brass candlesticks, some very old brass snuffers and a shining old brass tray.

One more touch I added: On the wall at the side of the despised sideboard I hung a large photograph of my dainty, silk-clad, hoop-skirted young grandmother. The quaint dishes and the lady who handled some of them blend beautifully into the "fitness of things."

Our Book-Shelf Lamp Stand

How many of you have to use kerosene for illuminating purposes? Some of my friends here in the country have private dynamos and their houses lighted by electricity. Some have acetylene gas, and a few use gasoline, which latter I do not like. It was kerosene or nothing for "we uns." And when we bought our graphophone, we had to dispense with the large stand that had held the lamp and our magazines. So we bought the little long, narrow book and magazine rack you see in the accompanying photograph. Books not in constant use were already in a bookcase in another part of the house, but there had to be some place for every day book friends and our latest magazines. The little rack holds the lamp just high enough so that one gets a much better light on his page than is possible with the usual table and the usual kerosene lamp. Another lamp can easily be placed in some other part of the room for adding more light, but for reading purposes the lamp as seen in the photograph is excellent. We have bracket lamps placed high wherever needed in other parts of the house. These are not ornamental, but help to make a substitute for gas or other lighting. If one must use kerosene, why not place the lamps high enough to give better results without having the light hitting one's eyes? The book and magazine rack could easily be made at home.

Some one reading this is saying: "I have no old oil paintings." "I haven't one old-fashioned dish." No matter. Tasteful color schemes don't cost any more than those chosen inadvisedly. Good lines are a refreshment and a delight. Penny prints, those of good "studies," sometimes magazine covers, often pictures clipped from magazines, hold a rich store in wall decoration, unless one uses too many of them. I know an inexpensively and tastefully furnished home where soft-tinted walls back best things in art passepartouted and penny purchased. The curlycues and gimcraks on the furniture have been removed, giving good lines in their places, and dull finished wood has "expensified" the cheap-looking furniture until that little home, furnished by a school teacher with not-too-good pay, is a beautiful ideal, and an expression of the mind that planned it.—The Make-Over Lady, Broome Co., N. Y.

CANNING COMPOUNDS HARMFUL

Canning compounds sold under various trade names for use in home canning are often harmful to health and should never be used by housewives, say the specialists of the Bureau of Chemistry, U. S. Department of Agriculture. These preparations, which are usually in powdered form and contain salicylic acid or boric acid, are unnecessary since fruits and vegetables can be kept for long periods in perfect condition without any chemical preservations whatever if proper methods of canning are followed.

The Federal Food and Drugs Act prohibits the use of harmful preservatives in foods which come within its jurisdiction. The food laws of nearly every state in the union forbid the sale within the state of foods which have been preserved with harmful substances. Altho neither the Federal or State laws apply to foods canned in the home and consumed there, it would seem that the housewife would not knowingly use, in the foods she preserves for her family, substances that are prohibited by law in foods for sale because the substances are injurious to health.

Book-Shelf Lamp Stand

"QUISSETT CAKE" WITH FLUFF ICING

The other Sunday I had a cake called "quissett cake." Being hurried on Saturday my cake had not been iced, so when ready to serve dinner on Sunday I just dipped out 3 spoonfuls of the following yellow and white fluff custard into a dish, added a little sugar and two teaspoons of cocoa and spread on my cake. It goes without saying that the men ate it. And here is the recipe for "quissett cake:"

Cream ½ cup of butter with 1½ cups sugar. Beat the yolks of 3 eggs until light, add to the butter and sugar, then slowly beat in ½ cup milk. Sift 1½ cups of flour with generous teaspoon of baking powder, and a pinch of salt and 2 tablespoons of cocoa (or melted chocolate). Mix and add alternately with white of egg beaten to a stiff froth. Bake in a moderate oven.

Yellow and White Fluff

Somewhere around 25 years ago I came to visit in the family of my (to be) husband's parents, and among the good things to eat I remember seeing Mother Shuman coming from the spring-house with a good-sized panful of yellow and white fluffy stuff. I never ate anything better. Finally, when I became one of "the house of Shumans" I learned how to make this delicious dessert.

The recipe is: To 1 qt. of milk, put on to heat, take 2 eggs and separate whites and yolks, then beat the yolks 12 times (that's the old hand-down number.) In a separate dish put 2 tablespoons of corn starch, stir in enough milk to make it smooth, mix in the beaten egg yolks. Sweeten the milk with a scant cup of sugar and when hot draw aside and stir in the egg mixture. Push back on stove and stir until cooked, then stir in ½ teaspoon of vanilla, and place 1 tablespoon of whipped white of egg on top, then draw the hot custard over it, until all the egg is worked in.—Mrs. Lloyd Shuman, Pa.

THE FARM TYPEWRITER

So much is written about the typewriter on the farm that I want to suggest another reason or two for having them. We will not have to convince many as a business necessity because we all know the pleasure we have in getting a typewritten letter in reply to an inquiry for stock or seeds, or whatever it may be. But in homes where there are school children a typewriter is coming to have a place. I know of some machines now that parents got just for this use alone. Perhaps there was the added hope that after learning to use the typewriter the youngsters would handle Dad's correspondence and save him a job that he didn't like or didn't have time to handle.

A boy or girl who uses a typewriter will get the correct spelling of the bothersome words straightened out a little quicker than with any other system. Typewriters have a habit of making incorrectly spelled words stand out so plainly that the writer wants to find out the right way to spell them. Besides this, the typewriter enables the young student to turn in written work that is a pleasure to read, both by himself and the teacher who has to handle his papers.

Besides this there are times when a number of copies of school work are wanted. With carbon paper this can be had easily. Different machines are adapted to this work but the average machine in good shape will make three copies and if a thin or "onion skin" paper is used, much better and more copies can be made at one writing.—E. R.

AGENT NUISANCE

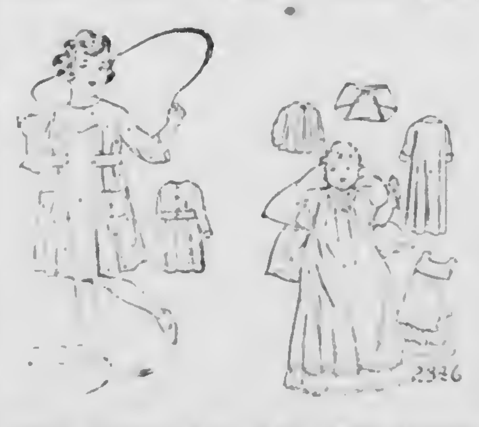
How shall we protect ourselves from the nuisance of agents who insist upon selling us something we can't afford and have no intention of purchasing? The problem never phases my pocket book, but it does very seriously encroach upon my time, which is nearly as precious to me as cash not because it is especially valuable in that commodity but because I have so much housework to do that must be done.

This morning as I was diving frantically into rather an unusual accumulation of morning's work, a gentleman appeared on the scene with a dainty little model of a new and wonderful steel range. He insisted that he was not an agent, he was simply an advertiser and demonstrator. But as he was very determined to sell, it seemed to me to be a distinction without a difference. I was at a disadvantage because he was demonstrating in my kitchen and it was very evident that I did need a range, but I needed time far worse. We were later than usual that morning, my breakfast dishes were only well under way, every inch of available space was filled with loaves of bread or tins of biscuit just set to rise. In one corner my little daughter was busily studying, and soon the dinner hour would be upon us. But that man had no better judgment than to bring my entire kitchen machinery to a standstill while he enlarged upon the merits of a thing I told him frankly that I couldn't possibly afford and which I wouldn't have bought under the circumstances if I had been amply able and had known I'd never get another chance—such is the perversity of human nature. Before the man even came in I told him it would be a waste of his time, and why should he persist in wasting mine also? Let's display a smallpox sign.—E. M. A.

PENNSYLVANIA FARMER PATTERNS

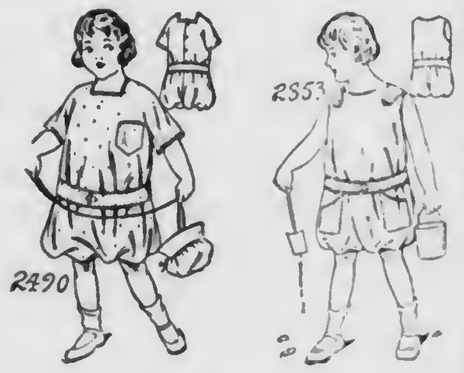
Give figures and letters of each pattern exactly as printed at beginning of each description or we will not be responsible for correct filling of orders. Give bust measure when ordering waist patterns, waist measure for skirts, and age for children's patterns. Address Pennsylvania Farmer, 2[illegible]1 S. Third Street, Philadelphia, Pa.

2885.—Pretty Dress For Wee Girl.—This model is good for challie, lawn, dimity, batiste, voile, silk, linen, percale and other wash goods. A plaited panel joins the side fronts of this model, which are cut to form a pointed yoke over the centre front. The pattern is cut in 4 sizes: 2, 4, 6 and 8 years. Size 6 requires 3¼ yards of 27-inch material. Pattern, 10 cents.



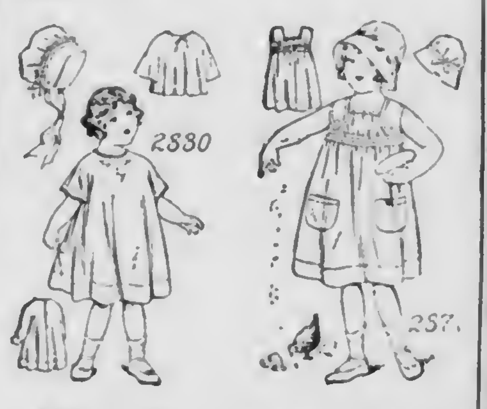
2846.—Set of Garments for Infants.—This comprises a pretty dress suitable for lawn, nainsook, or batiste, a comfortable petticoat for which cambric, long cloth or lawn may be used, also practical diaper drawers, and a dainty wrapper. The drawers may be of rubberized material, of drill, linen or domet flannel. The wrapper of flannel, cashmere, crepe or cambric. This pattern is cut in one size only. The dress will require 3½ yards with ruffle and ½ yard less without ruffle, or 2½ yards of lace edging for ruffles. Diaper drawers, ⅝ yard, kimono (long) 2⅞ yards, kimono (short) 1⅜ yards, petticoat 2¼ yards, with ruffles, and 1¾ without or 2½ yards of edging or lace, all of 27-inch material. Dress and petticoat may be finished without ruffles. The wrapper may be cut in sack length. Pattern, 10 cents.

2490.—Comfortable Garment For Play.—This model is good for gingham, galatea, chambray, linen, Indian Head, percale and khaki. The short sleeve and low neck made it ideal for warm weather. Waist and body portion of the fronts are cut in one, the body portion of back being buttoned to back of the waist. The pattern is cut in 5 sizes: 1, 2, 3, 4 and 5 years. Size 4 requires 2¼ yards of 36-inch material. Pattern, 10 cents.



2353.—A New Play Garment.—This makes an ideal play dress for warm weather and could also be used for a combination undergarment of waist and bloomers, or a bathing suit. Drill, khaki, gingham, cambric, percale, seersucker, repp and poplin are suitable materials. The pattern is cut in 4 sizes: 1, 2, 3 and 4 years. Size 4 requires 2⅝ yards of 36-inch material. Pattern, 10 cents.

2880.—Simple Set For Little Tot.—This comprises a pretty bonnet, a sack and a dress with kimono sleeve and simple lines. It will not take long, or be difficult to develop these models. Lawn, dimity, crossbar muslin, challie, poplin, voile or crepe are nice for the dress and sack. Flannel or silk may also be used. The cap may be of silk, cloth, or velvet, lawn, or batiste. The pattern for this attractive set is cut in 4 sizes: 6 months, one year, 2 and 3 years. Size 2 will require of 36-inch material, 2 yards for the dress, ⅞ yard for the sack, and ½ yard for bonnet, with ¼ yard of lining. Pattern, 10 cents.



2877.—Play Costume.—Here is just the dress and hat for warm summer days. This outfit may be made of khaki, lawn, percale, linen, cotton corduroy, pique, drill, gingham or chambray. Smocking may replace the gathers at the waistline; the shoulder straps may be of ribbon. Pattern is cut in 5 sizes: 2, 3, 4, 5 and 6 years. Size 4 will require ⅝ yard of 27-inch material for the hat, and 2⅝ yards for the dress. Pattern, 10 cents.

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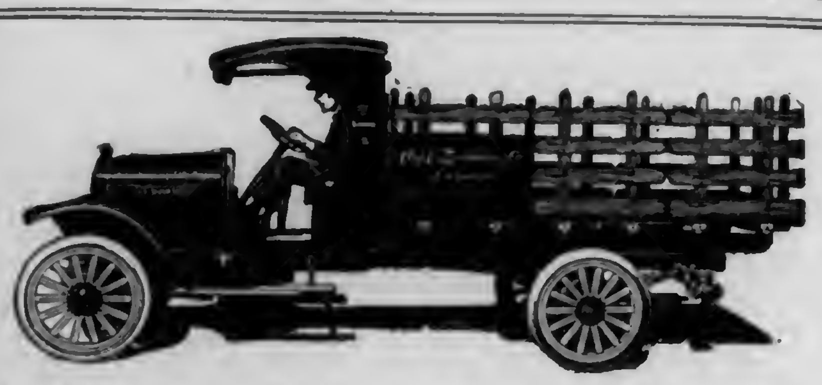

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POULTRY

SELLING PUREBRED POULTRY

There is no more resaon why the breeder of purebred poultry should market all of his stock for meat than for the breeder of pure bred dairy cattle to market all the calves for veal. Most of the breeders of registered cattle find that there is a demand for their surplus stock. They find it out by advertising the animals that they have for sale. Many breeders of purebred poultry are finding out the same thing. The reason is not hard to understand. Farming conditions have improved in many sections during the past few years and many farmers are able to spend money to improve the quality of their flocks of poultry.

A Real Cock of the Walk

Many small towns contain consumers who earn moderate incomes and have large back yards. They are becoming more interested in poultry than ever before if they have an abundance of waste for feed and do not have to buy much scratch grain and dry mash. They are the buyers who will wish to purchase a few hens or pullets and a cockerel. They are only satisfied with pure bred stock and they are one of the opportunities for the farmer with pure bred poultry who can supply the demand.

It is surprising how many owners of pure bred poultry on the farm do not make any effort to increase the number of purebred flocks by advertising their own birds for sale as foundation stock. Imagine a farmer with two purebred Holstein calves from good cows, selling them for veal without making an effort to place them with other farmers who need such stock. Yet in every community we can see fine flocks of Barred Rocks, Rhode Island Reds, or Wyandottes. Too often the surplus stock from these farm flocks goes to the market. The cockerels are culled and many that are good enough for breeders are sold as broilers or roasters. Cockerels bring a dollar or less when some farmer in a nearby section is looking for stock of that quality and anxious and willing to pay at least $3 or $5 each for such birds. This year when the cockerels are ready for sale, try advertising them at a price of $3 each or 2 for $5 and see if there are not many buyers who need new blood for their farm flocks. Of course, the price may be more, or less, depending on the quality of your stock but the above is just a general idea of the way to approach the business of selling surplus breeding stock.

Advertisements pay in both the local papers and in the farm journals. The advertising in the local paper will often bring customers to the farm and there is no trouble about crating or expressing the birds. The advertisement in the farm journal circulating in the community will also bring many buyers from surrounding farms and orders from distant sections in the state or even further. It is not difficult to ship young cockerels in lots of two or three. They will carry very well in light packing boxes with slats over the top. It pays to trade enough with one local dealer in the market town so that you can have a chance at a large number of these small boxes and crates. They are very handy for shipping produce as they can quickly be turned into strong carriers. Often the boxes can be obtained free as they are in the way in the store. Sometimes they can be purchased at about their value as fuel.

There are many commercial shipping crates on the market which are fine for shipping mature stock or high class birds of any age. In using carriers of that kind they should be ordered early as shipments may be delayed and their cost must be added to the price charged for the birds. Some breeders make their own shipping crates during the winter and during odd hours and rainy days in the summer. This may or may not be profitable, depending upon the cost of material and the value of the breeder's time for other work. In our own experience we cannot afford to use home-made shipping crates because of the time it takes to make them. The commercial shipping coops come knocked-down and a large number can be stored in small place. The collection of light shipping boxes obtained in the city can be hauled back when going to town with produce and they cost very little.

When poultrymen and farmers figure time as a large part of their capital and make only the things that they can make at a profit, they will find that there is more profit and less puttering to the business. However, this does not apply to all kinds of equipment on the poultry farm as much of it is very high when purchased on the market and can be made at a great saving. It all depends on the amount of business the poultryman is doing and the amount of other work requiring time. It takes common sense to make poultry pay, the same as with any other business.—R. G. Kirby.

CLEANLINESS IN THE POULTRY YARD

As the hot weather of midsummer approaches increased care is necessary to insure cleanliness in the poultry yards and houses, for if rubbish is allowed to collect or the droppings are not removed promptly the way is paved for the spread of vermin and disease.

In the rush of early summer work it is easy to neglect giving the houses and yards the attention they should have to keep them in a sanitary condition. This is not so apt to be the case with properly constructed houses, as they are more easily kept clean. But there are still a great many of the other kind, and the sooner they are done away with and replaced by modern buildings the better it will be for the farmer. Simply constructed houses are not only cheapest to build, but are also best for the chickens, most easily kept free from vermin, and save much time and labor.

Both for cleanliness and convenience it is best to have the nests so constructed that they may be easily moved, and the roosts should be either hinged or removable. A good plan is to have the nests outside the house. For this purpose a shed at one end of the house, or joining two houses, is excellent. Left open in front, it may be used as a scratching and feeding shed in inclement weather and it provides a shady place for the hens during the hot summer months. If the nests are placed inside the house, let them be where they will not become fouled by droppings. There are, of course, several ways in which this may be accomplished, each method having its champions. In our houses at Riverview Farm we use several methods, as some of the houses are equipped with platforms to catch the droppings and some are not. Whatever method is used the droppings should be removed from the houses at least twice a week. Daily is much better.

Nests should be renewed frequently with clean straw or hay and it is well to occasionally dust thoroly with insect powder as a preventive of lice. Unless this is done they are apt to get a start before one realizes it. Inattention to perches often is the cause of lice and mites getting a start in a poultry house and causing endless trouble before they are brought under control. They collect on the under side of the perches and in every crevice, where they escape notice except on close examination. Scrape and oil all of the perches thoroly, then give the whole interior of the house a coat of whitewash, preferably hot. If it is found that the mites have already become numerous it is well to pour kerosene on the perches and burn them off, care being taken to prevent damage to the house. This is a drastic measure, but is sometimes necessary.

Dust baths are a great aid in keeping the fowls free from vermin and they should be kept under shelter so they will be available at all times. Cleanliness, too, must extend outside the houses. Rake the yard over and burn all accumulated trash. The practice of allowing brush piles to accumulate around the yards is not only unsightly, but unsanitary as well, as it provides a breeding place for vermin.

A fruitful source of disease in the poultry yard is the feeding troughs and drinking vessels. If food is left in the troughs for any length of time in hot weather it becomes sour and a breeding place for millions of disease germs. If eaten by the hens, it is liable to cause serious digestive troubles. The drinking fountains too often are allowed to become fouled and the water unfit for the fowls to drink. These and other details, small in themselves but very important, must be carefully attended to in order to insure the health of the fowls. If they are properly looked after there will be little or no disease among them.—N. S. Green.

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All makes of trucks are not fitted for farm service. Many are too complex. They require an expert mechanic to operate. Having so many intricate parts, they are constantly getting out of order. Time is lost, work halted, and men are idle for frequent repairs.

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More than 200 lines of business in 27 countries rely on Stewart durability. Dairymen, stockmen and farmers, distant from repair shops, choose Stewarts, because they are independent of repair shops. Just look at the Stewart record on the farm.

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And the first 50 still give dependable economical service. Of what other truck could that be said?

Stewarts cost $200 to $300 less than average trucks of the same capacity. And they save for you constantly, every day and hour of operation.

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Investigate the Stewart. There is a size for any need from ¾ ton to 3½ tons. You will be convinced too, when you have examined the reasons for Stewart supremacy.

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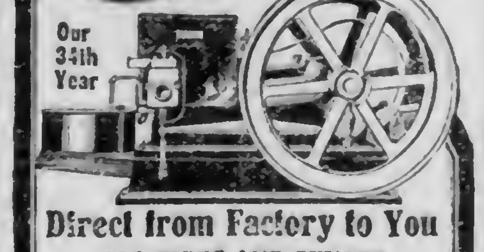

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SANDY OF SEVEN

By S. TEN EYCK BOURKE

Joe Sanderson's mates in Fire Engine Company Number Seven said he was all of a man and a born fire fighter. That was high praise, for the men of Company Seven were the picked crew of Mine City's Fire Department, and Sanderson hailed from an outside town.

He stamped into the Fire Chief's office two days after the biggest fire Mine City ever had, when the whole department was disrupted, with half its best men disabled either temporarily or permanently, like Tom Kellley.

"I'm after a job; I hear you need men," Joe said: he wasn't given to wasting words.

The chief looked him over with an experienced eye, and spotted him for a big man in courage as well as frame.

"Take you on as a substitute for Kelley with Seven," he snapped, "Can't make it a permanent job till I see how things jump with Kelley. He's got a missus and two kids."

Joe nodded. He wasn't the kind to better himself thru another man's misfortune. Kelley could stay on the city payroll till he was fit for a safer job than fire fighting—the Chief said he'd never come back to that—to provide for his wife and two little ones.

"After that we'll see," the Chief said, "providing you make good of course, Sanderson."

Joe wasn't bothering much about that part, nor were the men of Seven when they saw how he took hold. The district they patrolled had more than its share of fires in the next five months and there wasn't one where Joe was not first man in and last one out of the greedy licking flames and choking black smoke, if the life of man, woman or child depended on his risking his own to save them.

His mates took to calling him Sandy of Seven. Sally Morgan dimpled over the name, too, and made the big fellow flush with pride—and then Joe learned what it really meant to fight fire; to face the red flame of temptation, of wrath and revenge and desire which tempers the metal that is in a man, or tune him into a quitter, according to the kind of fighter he is.

Joe didn't tell Sally how much he thought of her, tho his eyes were always saying what his tongue refused; he was as awkward with her about it as only a big, brave hearted man can be with the blue-eyed wisp of a girl he loves. Sally, of course, was innocent as a kitten, but she was witch wise, as girls are. She understood, and just nodded and smiled when Joe floundered into words.

"When I get my step, Sally—when I get that," he'd begin; then he'd begin; then he'd lose courage and break off. "There are some things a man can't do. Kelley's got a wife and kids, and we're young."

Sally liked him all the better for feeling that way, but her brother, Tom Morgan, saw things from a different angle. Sanderson, coming from another town, didn't know the story of the Morgan orphans, and of course he wasn't talking about the girl he cared for. So he didn't know Sally had been mother and father to Tom, for more than ten years—ever since she was twelve, when her mother left the "savings and nine-year-old Tommy, and keep him from going her father's way" to her care.

The savings lasted till Sally was able to work for both. When Tom got big enough to take a hand, it didn't occur to him to look after her; the way he figured it, it was up to Sally to marry John Hetch, who had something besides his salary as lieutenant with engine Company Nine, Seven's chief rival, to provide a home for the three of them—when Tom could give up the job he hated at the chemical works.

Whether Hetch had a chance with Sally before Sanderson got in the game doesn't matter—he thought he did, and so did Tom, and they both acted accordingly when the time came. They didn't have long to wait, either; about five months from the day Joe came to Mine City, in fact.

"A week more and I'll be a regular fireman, Sally," Joe said, one night. "Papers of appointment all signed and pigeonholed in the Chief's desk waiting for the first," he hesitated, and then softly substituted "Dear" for her name for the first time. Sally didn't seem to mind that.

The next morning at eleven a furious fire was raging in the big chemical works factory, and before the week was out Joe Sanderson, "Sandy of Seven," was dishonorably discharged from the Fire Department under the terrible indictment of willfully deserting a comrade and a lad in it—John Hetch and Tom Morgan.

The crew of Seven and Nine got the two out safely, and Hetch and Morgan were the chief witnesses against Sanderson in the little improvised courtroom upstairs in Seven's engine house. The gray-haired Chief listened with clenched jaws, and the men of Seven averted their downcast, frowning faces, while Lieutenant Hetch swore away Joe's honor.

Sanderson, he averred, had not shown signs of being dazed by the drug fumes of the chemicals, when he found young Tom Morgan and himself pinned under a beam. Leaning on his elbow, pulling at his big mustache, he leered at Joe like a gloating hyena and made the most of his chance to thrust him out of his way with Sally. Tom Morgan backed him up.

Sanderson, he swore, had laughed when he saw who they were, and backed off. Hetch never told him not to waste time trying to move the beam alone; to fetch his mates instead, or they'd all three likely die.

Of course every one knew Joe was no coward, but he was after Sally, and she liked Hetch best.

The Chief shut him off with what sounded more like an oath than an admonition, but the grim suggestion stuck. Joe was too square himself to think of lying out of the hole that was none of his digging.

"The drug fumes of the burning chemicals had me that crazy I can't swear to what Hetch did say," he admitted helplessly. "Only I know I didn't have sense enough left even to leave him, if he hadn't told me. I don't even know what I told the boys when I got down."

That was the worst of it; he had not told them a word about the two helpless men he had left upstairs in the burning factory. So the Chief tore away his fireman's badge from his blue uniform coat, and sent him away with a white, quivering face.

"Any man who shows the white feather doesn't fit in our Fire Department. But your record won't follow you to another city, Sanderson," the Chief said.

Sanderson was too dazed when he went away to realize the full import of the blow that had struck him with all the suddenness of a rifle bullet from an unknown source. Two things only stood out clearly in his mind. The Chief's warning meant that Mine City wanted him no more than its Fire Department did, and, according to Tom Morgan, Sally really cared for John Hetch.

He couldn't blame her, of course. Hetch was a nice looking, glib spoken chap, and well fixed, and he hadn't told her himself that he cared. She wouldn't want to hear that now. If his mates and the Chief could believe that he, Sandy of Seven, would desert any man in Hetch's fix and Morgan's, he couldn't expect Sally to take his word against her brother's, he reasoned. So Sanderson left Mine City without a word to the sore-hearted girl—the one thing needed to fix the belief in his guilt in her mind if anything could.

For months Sanderson drifted from town to town, fighting his despair and outlining futile plans to regain his good name and to get back at Hetch, for he knew the other had sworn to ruin him. One thing held him back; he supposed Sally had married Hetch by now, since she cared for him as Tom said, and he couldn't hurt her man without hurting her.

Well, that left only one thing, to drop the old life entirely. He dropped the name of Sanderson, too; people would shorten it to Sandy, and the memories it evoked hurt. So it was as one Joseph he joined when the Pittsburgh Mine Coalition advertised for men for its experimental bride of mine rescuers.

It wasn't exactly work for weak-kneed gentlemen. Joe's old job with Company Seven was a white kid glove affair beside this form of fire fighting, hundreds of feet underground, in a coal hole where men burrow and drill and blast with that devil's plaything, dynamite, till the breathing lighted darkness bursts into flame, or a wall of poisonous gas shuts them off from escape. The men who go to their rescue, in the life saving, oxygen equipped fire helmets and fireproofed suits, can work in the choking smoke for hours, but always they face an imminent explosion of the treacherous fire damp, that flings forward like a flaming serpent to cut them off without warning from the shaft and their own hope of life.

Joe found a grim satisfaction in making good against the very thing that, in a lesser form—the blinding drug fumes of burning chemicals—had beaten him once. And he did make good. Whenever there was a call for a man to tackle a particularly dangerous job, Joe was always the one to volunteer; not a man in the brigade equalled him for daring and skill.

That was how Joe went back to Mine City. The Mine Rescue Brigade was still an innovation, and constantly being drafted upon, for the large body of miners had not yet taken up the work themselves. A hurry call came into the Pittsburgh headquarters from the Coalville Collieries one day when he was just back from another job.

"Seems to be bargain day for mine fires and explosions," the superintendent growled, reading out the terse summons for help. "Ain't another man of the brigade who isn't away, but Coalville's too big a joint for us to miss out on. It means a contract for us if you make good, Joseph. Of course those jays waited till the last moment before sending in a call for help. Seems the Fire Department lent help and they got the miners out, and then they found one of the firemen and another volunteer were still down in the suffocating fumes and flames—"

"Where only us smoke eaters can go," Joe finished the regulation appeal with a grim chuckle. "I'll go and make good. Where's Coalville?"

He was too busy getting his equipment together and bolting for his cab to catch the superintendent's answer. It wasn't till he began to recognize the outlying districts that he remembered. Coalville Colliery was a property of the Mine City Chemical Works, on the outskirts of the town.

"Maybe they won't remember me in the excitement; the name Joseph will likely mislead them anyway," he thought as the special lurched to a stop with a final wail from the big mogul. "What a joke on the crack fire department, calling in the man they chased out to save one of their men!"

The special had pulled up near the high wooden structure of the mine shaft house. A pall of smoke hung over it as Joe craned his neck at the windows searching the platform for some face he knew. He gave a sigh of relief when he did not recognize any one, and swept up his armor, strapping parts of it around him as he made his way from the train and up the planked stairway to where a sifting torrent of coal smoke and steamed poured up funnelwise to the sky. The somber faces of the crowd told him that his attempt at rescue came at a final desperate stage.

"I bet they don't count on getting out that fire laddie," Joe told himself. "I wonder who he is," he speculated. But he did not wish to disclose his own identity—not unless he made good, he told himself—so he did not ask questions that might betray him.

"Some one of you fellows will have to help make me ready," he told the miners bunched about the shaft mouth that belched smoke like a chimney. He took the head armor from under his arm and dropped on one knee, "I guess you can manage the buckles; it's a simple arrangement."

"You won't win thru, even with your tin headpiece," the man said gloomily. "You can fight smoke and gas maybe, but not that red death o' flames raging between you an' the south drift where the fire lad's trapped. He's alive," he added. "He's still tapping on the air pipe now and then."

"Cage ain't working right, either," another consoler told him cheerfully. "You won't come back no more'n them—"

Joe brushed him impatiently away from the huge square hole in the ground and stepped into the waiting cage. He shot down into the black funnel and struck bottom so quickly he knew there was truth in the last man's warning.

"Well, even if the cage does stick, there's ladders in the shaft," he told himself as he scrambled out into another smoke filled hole.

(Concluded Next Week.)

IF

If you can keep your head when all about you
  Are losing theirs and blaming it on you;
If you can trust yourself when all men doubt you,
  But make allowance for their doubting, too;
If you can wait and not be tired by waiting,
  Or being lied about, don't deal in lies,
Or being hated, don't give way to hating,
  And yet don't look too good nor talk too wise;

If you can dream, and not make dreams your master;
  If you can think, and not make thoughts your aim,
If you can meet with Triumph and Disaster
  And treat those two imposters just the same;
If you can bear to hear the truth you've spoken
  Twisted by knaves to make a trap for fools,
Or watch the things you gave your life to, broken,
  And stoop and build 'em up with worn-out tools;

If you can make one heap of all your winnings
  And risk it on one turn of pitch-and-toss,
And lose, and start again at your beginnings
  And never breathe a word about your loss;
If you can force your heart and nerve and sinew
  To serve your turn long after they are gone,
And so hold on when there is nothing in you
  Except the will which says to them: 'Hold on!'

If you can talk with crowds and keep your virtue,
  Or walk with kings, nor lose the common touch,
If neither foes nor loving friends can hurt you,
  If all men count with you, but none too much;
If you can fill the unforgiving minute
  With 60 seconds' worth of distance run,
Yours is the earth and everything that's in it,
  And, which is more, you'll be a man, my son!"

—Rudyard Kipling.

Dairy cocktails are due to be popular after July 1. How about this for a glass "that cheers but does not inebriate?" One well-beatened egg, a few tablespoons of raspberry juice and milk shaken vigorously together. It is called Carnation Julep and is guaranteed to make Milwaukee jealous.

Where the Titan Comes In

IT PAYS to do farm work at the right time. There are only a few days when plowing, seeding, haymaking, harvesting, threshing and other essential jobs can be done to best advantage. To be able to take care of these operations at just the right time often means the difference between success and failure with a crop; between a big profit and, perhaps, no profit at all.

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PENNSYLVANIA FARMER, 261 South Third Street, Phila., Pa.

Markets

PHILADELPHIA PRODUCE

Philadelphia, Pa., July 21, 1919.

Altho New Jersey is now supplying a big share of the potatoes being used in Philadelphia, the movement has been handicapped by the almost incessant rains of the past several days, and supplies are limited. With lighter supplies prices are a little higher than they were a week ago and New Jersey potatoes are now selling at $1.25-1.40 per ⅝ basket with medium sized at $1-1.20, and No. 2's at 50-75c per basket. With favorable weather, digging should be at about its height this week, but from reports the crop is not a heavy one and receivers are not looking for much lower prices. The market on southern potatoes has been helped by the nearby farmers being unable to dig their potatoes this week, and higher prices have been prevailing. There were 36 cars of southern tubers here this morning and best Eastern Shore stock sold at $6-6.75 per barrel, with No. 2 potatoes at $2.50-3.50 per barrel. Norfolk and Maryland grown potatoes sold at $6-6.50 per barrel for primes, with No. 2's at $2.75-3.25.

Vegetables

Supplies of green beans are somewhat more plentiful than they were a week ago, and many of the beans are beginning to show age. For this reason lower prices are prevailing, especially on the green beans which are selling at 50-75c per basket for best with the poor at 25-35c per basket. Some fancy wax beans are selling up to $1 per basket but most of the offerings are too poor to exceed 50-75c per basket, with some very poor at 25-35c. Beets have become quite plentiful during the past week and the market is quite a little lower, most beets selling at 2½-3½c per bunch with some fancy at 4c per bunch. Carrots are very plentiful and unless strictly fancy are hard to move, some only bringing 1c per bunch with most sales at 1½-2½c per bunch and best at 3c per bunch. Cabbage is a very plentiful commodity just at the present and low prices are prevailing. Good New Jersey is selling at 26-40c per ⅝ basket, while the Pennsylvania barreled cabbage is only bringing $1.25-1.65 per barrel. Celery is not bringing as high prices as it did a week ago, as the Great Meadows, N. J., stock is now only bringing 50-65c per bunch, with the hearts at 6-8c per bunch. New York state celery sells a little higher as the bunch-es are larger, going at 60c-$1 per bunch.

Prices on corn are showing very little change as most corn is now selling at $1.25-1.65 per basket with fancy at $1.75, and poor at $1-1.10 per basket. Cucumbers are very much lower than they were a week ago, as the southern barreled stock sold today at $2-3 per barrel while the Maryland and Delaware cucumbers in bushel hampers sold at $1.50-1.75 per hamper. Quite a sprinkling of New Jersey cucumbers are now on the market and these are selling at $1.25-1.75 per ⅝ basket. Good egg plants are steady, sales being made today at $2.75-3 per ⅝ basket. Some of the egg plants however, are small and only ordinary in quality and these are selling around $2.25-2.50 per basket. Good lettuce remains firm and active and selling at $1.50-2 per box, but there is very little good lettuce around, most of the offerings being poor in quality and moving hard at 50-75c per box. There is very little change to note in prices on fancy onions which are still selling at $1.75-2 per ⅝ bushel basket for the New Jerseys. There have, however, been some poor onions thrown on the market which are meeting very slow demand. New Jersey white onions are selling at $2.75-3.50 per bushel hamper for the large sized, while the small boiling white onions are firm at $4-4.25 per hamper.

Parsley is showing practically no change over last week, sales ranging generally at $1-1.50 per hamper containing 100 bunches. Peas are a scarce commodity, some New York state peas recently selling at $4.50 per bushel, while the New Jersey peas brought from $1.50-3.25 per ⅝ bushel basket, as to condition. Peppers are arriving a little more freely and prices are easing off. While a few peppers sold today at $1.50 per ⅝ basket, most sales were made at $1.25 per basket with some as low as $1-1.10. Radishes are in light supply but the demand is slow and prices are easier at 1-2½c per bunch, with few bringing over 2c per bunch. The first New Jersey lima beans of the season are making their appearance and selling around $5 per ⅝ bushel basket. Squash is getting very plentiful and the prices are again declining. While some squash sold today at 40-45c per ⅝ baskets, others were being made at 20-35c per basket, and the lower sales were in the majority. Tomatoes are a very hard commodity to quote at this writing. The excessive rains of the past few days have had a bad effect on tomatoes, most of which are in poor condition, being water soaked, poor, spotted and rotten. Out of approximately 15,000 baskets of tomatoes here today, there were probably not over 400 or 500 of good tomatoes. Strictly fancy tomatoes being scarce, bring very high prices, some sales being made at from $3.50-3 per basket. The poor tomatoes on the other hand are moving very slowly at very low and irregular prices, ranging from 1-15c per basket up to $1.50-1.75 per basket on good grades. Rutabagas are meeting slow movement and sales are at 50-65c per basket, or $2-2.50 per barrel. Spinach is very scarce and when here sells promptly at high prices, some sales being reported at $2.25-2.50 per bushel box or hamper. Watercress is in light supply and about steady at 2-2½c per bunch.

Fresh Fruits

The offerings of nearby Pennsylvania and New Jersey apples are now quite plentiful, but they are showing a very wide range in quality and condition. Strictly fancy hand-picked apples are selling at 75c-$1.50 per ⅝ bushel basket, with No. 2's at 50-75c per basket while the culls and windfalls move slowly at 25-30c per basket. Only a very few southern apples have been on our market recently and these have sold from 50c-$2.50 per hamper, as to quality and condition. The continued heavy rains of the past several days have had a bad effect on the small fruits business, as nearly all berries have been arriving in a soft, wet condition and therefore low prices have been prevailing. Blackberries have sold mostly at 15-18c per quart, with only an occasional lot at 20c per quart. Huckleberries ranged today from 15-24c per quart with only a very few good enough to exceed 20-22c per quart. Red raspberries are mostly very poor and sold slowly at 6-10c per quart, with an occasional fair quality lot at 12-14c. Cantaloupes are showing a very wide range in quality and condition, making a corresponding wide range in price. Many are soft and overripe and these are hard to sell at the low range of prices. Today sales of standard crates were made from $1.50-3.50 per crate while the pony crates ranged from $1-3 and the flat crates from 50c-$1.25. Watermelons are in very liberal supply and prices are much lower, best melons today bringing only $250-275 per car, with the great bulk of the sales ranging from $125-225 per car.

Poultry

The sharp advance in the market on live fowls as reported in these columns last week has been steadily maintained and today prices are showing very little change. Offerings are cleaning up in good shape at 40-41c per pound. Spring chickens on the other hand have become more plentiful and prices are much lower. Best broiling chickens are now selling at 37-40c per pound, while the Leghorn broiling chickens are weak at 34-37c per pound. Old roosters are a trifle weaker as they are now selling at 24-25c per pound, which is about 1c below last week's prices.

Eggs

Under a continued active demand and somewhat lighter supplies the market on strictly fine eggs is firm and about 2c per dozen higher than a week ago. Undergrades on the other hand are in fair supply and the market is possibly a little weaker. Sales of eggs are being made on about the following basis: Pennsylvania and other nearby current receipts, 50c; firsts, 52c; seconds, 36-42c. Western extra firsts, 52c; western firsts, 50c; southern eggs, 36-46c as to quality. The outlook is for a continued firm market on strictly fine eggs, with poor eggs or stock showing the hot weather defects selling at irregular prices.

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LANCASTER PRODUCE MARKET

Lancaster, Pa., July 21, 1919.

Housewives today suffered "H. C. L." shocks in the berry market when they started their drive for canning goods. Huckleberries were offered in small lots at 28 and 30c per quart, and other berries were almost as high. Few sales were reported. The first notable offerings of corn were quickly absorbed at prices ranging from 15 to 60 cents per dozen ears.

Butter and Eggs.—Creamery butter, 70c lb., country butter, 65-70c lb.; fresh eggs, 48c doz.; ducks eggs, 50c doz.; goose eggs, 10 cents each.

Poultry.—Dressed old chickens, $1.75-2 each; dressed young chickens, $1.50-1.75 each; old live chickens, scarce, 28c lb.

Vegetables.—Corn, 15-50c dozen; beets, 5-10c bunch; beans, 10-12c per ½ peck; tomatoes, 15-20c box; lima beans, 15-20c pint; cauliflower, 10-15c head; cabbage, 5-10c hd; potatoes, 25-35c per ½ peck; do., $2-2.25 bushel; turnips, 15c per ½ peck; spinach, 20c per ½ peck; parsnips, 5c box; lettuce, 15-20c head; oyster plant, 10c bunch; rhubarb, 5c bunch.

Fruit.—Apples, 30-35c ½ peck; raspberries, 20-25c box; blackberries, 20-25c box; huckleberries, 25-28c quart; pears, 15c box; watermelons, 35-50c each.

Grain Market.—Wheat, $2.20 bu.; rye, $1.50 bu.; oats, 80c bu.; ear corn, $1.75 bu.; timothy hay, $37 ton; mixed hay, $35 ton; wheat straw, $15 ton; oat straw, $13 ton.

YORK PRODUCE MARKETS

York, Pa., July 21, 1919.

With the exception of eggs, butter and cabbage, there were large supplies of all seasonable produce. Especially was there a large quantity of apples displayed, altho the quality was not up to standard, coddling moth and scab having done considerable damage. There will be a fairly large supply of the summer varieties of apples in this county, but the quality will be low. However, the supply of No. 1 winter apples will be far below the average.

Eggs.—48-55c per dozen.

Butter.—Country, 55-60c lb.; separator, 60-65c lb. Milk, 10c quart.

Poultry.—Hens, 28-30c lb.; springers, 35-40c lb.; dressed, 90c $2.25 each.

Vegetables.—Early potatoes in the trucking sections of York County are not over 30 to 40 percent of a normal crop. They have advanced this week and are selling from 25-30c per ½ peck; cabbage, 4-10c head; lettuce, 3-6c head; beets, 5c bunch; onions, 5c bunch; radishes 5c bunch; lima beans 15-20c pint; soup beans, 10-12c pint; celery, 6-15c stalk; rhubarb, 4-5c bunch; asparagus, 8-10c bunch; lard, 32c pound; tomatoes, 15-30c box; corn, 20-35c per dozen.

Fruit.—Apples, 10-40c ½ peck; 10c box; raspberries, 18-22c box; blackberries, 10-24c box; currants, 15-18c box; plums, 18c pint; pears, 5-10c box.

Retail Grain Market.—Wheat, $2.60; corn, $2.20; oats, $1.01; rye, $1.65; bran $2.45; middlings, $3 per cwt.

Wholesale Grain Market.—Wheat, $2.30; corn, $2.00; oats, 80c; rye, $1.45; bran, $45 per ton; middlings, $54 per ton.

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BALTIMORE PRODUCE

Baltimore, Md., July 21, 1919.

Produce.—Potatoes, new, No. 1, $2.75-3.50 cwt.; do., No. 2, $1.50-2. Cabbage, new, $1-2 crate; do., $3-9 per 100. Lettuce, 50c-$1 basket. Onions, nearby, $2.25-2.50 basket. Rhubarb, 2½-3½c bunch. Cucumbers, 65-80c basket. Carrots, 1-2c bunch. Green beans, 40-75c bu; do., wax, 75c-$1 bu. Beets, 1-2c bunch. Peas, $1.50-3 bu. Green corn, 25-35c dozen. Tomatoes, $1-1.75 basket. Squash, 40-50c basket.

Fruit.—Apples, early harvest, $3.350 bbl.; 75c-$1.50 bkt. Blackberries, 20-22c qt. Red raspberries, 16-18c pt; do., black, 25-28c. Currants, 16-20c quart. Huckleberries, 16-18c quart. Cantaloupes, $1-1.75 basket. Peaches, $1-1.50 basket. Watermelons, $15-40 per 100.

Butter.—Creamery, western fancy, 53-54c; choice, 51-52c; pound prints, 54-56c. Nearby rolls, 45-46c. Dairy prints, 45-46c.

Eggs.—State, Pennsylvania and nearby, 44-45c; Eastern Shore and Virginia, 43-44c. Southern, 42-43c.

Live Poultry.—Springers, 40-45c lb.; old roosters, 23-24c; old hens, 37-38c lb.; ducks, 44-45c; Eastern Shore and Virginia, 43-pair; guinea fowls, 50c-$1 each.

Grains.—Wheat, new No. 1 red, $2.38¾c do., No. 2, $2.35¾; do., No. 3, $2.31¾; garlicky, $2.29-¾-2.36¾. Corn, bag lots, No. 3, $2.10 bu. Oats, standard white, 86c; No. 3 white, 85c. Rye, nearby, $1.60.

Hay.—No. 1 timothy, $34-35 ton; do., standard, $33-34 ton. Light clover, mixed, $29-31 ton. Clover, mixed, $25-30. Clover clear, $25-27 ton. Tangled rye straw, $11.50-13.50. Wheat straw, $7.50-8.50 ton. Oat straw, $11-12 ton.

Mill Feeds.—Winter wheat bran, $55 ton; brown middlings, $55 ton; white middlings, $65 ton.

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NEW YORK PRODUCE

New York City, July 21.—Butter steady; receipts, 8,672 tubs; creamery, higher than extras, 54½-55c; creamery, extras (92 score), 54c; firsts, 51½-53½c; packing stock current make, No. 2, 45½c.

Eggs.—Firm; receipts 11,275 cases; fresh gathered extras, 53-54c; do., extra firsts, 50-52c; do., firsts, 46-49c; state, Pennsylvania and nearby western hennery whites, fine to fancy, 65-67c; state, Pennsylvania and nearby hennery whites, ordinary to prime, 55-64c; state, Pennsylvania and nearby hennery browns, 55-58c; do., gathered, browns and mixed colors, 50-53c.

Cheese.—Steady; receipts, 983 boxes; state, whole milk flats, current make, specials, 32½-33c; do., average run, 31½-32c; state, whole milk, twins, current make, specials, 32-33c; do., average run, 31-32c.

Poultry.—Live firm; broilers, 38-43c; fowls, 39c; old roosters, 24c; turkeys nominal. Dressed steady; broilers, 31-55c; chickens, 40-43c; fowls, 35-39c; old roosters, 19-23c; turkeys, nominal.

Vegetables.—Potatoes, new, No. 1, $5.50-6.50 bbl.; No. 2, $2.50-3.50 bbl. Beans, $1-2 basket. Beets new, $1.50-2.50 per 100 bunches. Carrots, new, $1-2 per 100 bunches. Scullions, $1-2. Cabbage, $1.75-2.25 crate. Lettuce, 25c-$1 basket. Tomatoes, Jersey, No. 1, $2.50-5 box; culls, 75c-$1.

Fruit.—Apples, $2-3 basket. Raspberries, 10-16c pint; peaches, $1-3.50 crate. Jersey, $1.50-1.75 crate. Cherries, red sweet, 8-lb. basket, $1-1.50; red sour, do., 75-90c. Gooseberries, 10-20c quart. Currants, 10-25c qt.

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PHILADELPHIA LIVE STOCK

Philadelphia, Pa., July 21, 1919.

Receipts of live stock for week ending July 19 were as follows:

	Beef Cattle	Sheep and Lambs	Hogs
Total for Week	2,359	7,629	5,156
Previous Week	1,989	4,305	5,163

Calves.—Receipts of calves last week were 2,331 head against 2,064 head week previous.

Beef Cattle.—Steers ruled firm and higher, with demand fairly active. Calves were slow of sale and barely steady.

Steers, fair to good, $14.50-16; common to fair, $12.50-14.50; cows, fat, per pound, good to choice, corn fed, 10-11½c; fair to good, 8-10c; do., common to fair, 6½-8c; bologna cows, good, fleshy, 5½-6½c; ordinary, 4½-5½c; calves, extra choice, $22-22.50; fair to good, $20.50-21; common, $15.50-18.50; heavy, $10.50-12.50; Tennessee, choice, $16-18.50; other southern, $10.50-14.50.

Sheep and Lambs.—Sheep were in fair request and steady. Lambs were dull with ample offerings.

Sheared wethers, extra, $10.75-11.25; good to choice, $9.25-10; medium, $7.50-8.50; common, $4-5.50; ewes, fat, heavy, $7.50-8.50; spring lambs, choice, $17.50-18; medium, $15-16; do., culls and common, $12-13.

Hogs.—Trade was slow and the market ruled weak and lower with ample offerings. Quotations for best westerns, $24-24.50; Pennsylvania and Maryland, $22-22.50.

City Dressed Stock.—The general market ruled firm with demand fair and prices of steers were higher. Quotations:

Steers, 23-26c; heifers, 19-23c; cows, 17-20c; calves, city dressed, choice, 28-30c; country dressed, 24-26c; sheep, 20-23c; lambs, spring, 30-32c; hogs, 30½-31c.

LIVESTOCK

Pittsburgh, Pa., July 21.—Cattle steady; supply 115 loads; prime, $15.25-16.

Sheep.—Steady; supply 18 double decks; prime wethers, $10.50-11; culls and commons, $3-5; lambs, $12-16.75; veal calves, $18.50-19.

Hogs.—Higher; supply 10 double decks; prime heavies, $22.25-22.75; mediums and heavy yorkers, $23.40-23.50; light yorkers, $23.40-23.50; pigs, $22.25-22.50; roughs, $18-20.

New York City, July 21.—Beeves.—Receipts, 3,775; weak; steers, $11-16.25; bulls, $7.50-12; cows, $3.75-11.50.

Calves.—Receipts, 5,700; weak; veals, $16-22; culls, $12-15; skim-milk calves, $11-13; westerns, $15.75.

Sheep and Lambs.—Receipts, 17,600; weak; sheep, $7-10; culls, $4.50-6; lambs, $13.75-17; culls, $11-13.

Hogs.—Receipts, 3,220; steady, at $23-23.25; pigs, $22-22.50; roughs, $20-20.25.

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PHILADELPHIA HAY AND GRAIN

Philadelphia, Pa., July 21, 1919.

Baled Hay and Straw.—Receipts, 72 tons of hay and 2 cars of straw. Quiet and unchanged. Quotations follow:

Timothy hay, according to location, No. 1, nominal; No. 2, $36-37; No. 3, $32-33. Clover-mixed hay, light mixed, $36-37; lower grades, $31-35.

Straw, No. 1 straight rye, $13-13.50; No. 2 do., $12-12.50; No. 1 tangled rye, $12.50-13; No. 2 do., $11.50-12; No. 1 wheat straw, $11.50-12; No. 2 do., $10.50-11; No. 1 oat straw, $12-12.50; No. 2 do. $11-11.50.

Bran.—Firm at late advance. We quote car lots, including sacks: Soft winter bran, in 100-lb. sacks, per ton, $46-46.50; spring bran, in 100-lb. sacks, per ton, $44.50-45.

Wheat.—No. 1 Red Winter, $2.39; No. 2, $2.36.

Corn.—Yellow, in car lots, $2.12-2.14.

Oats.—No. 2 white, 87-87½c; No. 3, 86-86½c.

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NEW YORK HAY AND GRAIN

New York City, July 21, 1919.

Feed.—A very firm tone prevailed in the market for mill feed, due to a scarcity of offers more than to any increase in the volume of buying. Mills have very little to sell and seem inclined to raise their figures, as they are not looking for any large movement until the new crop becomes available.

Quotations: City feed, bran, $44; middlings, $53, in 100-pound sacks; red dog, $67, nominal, in 100-pound sacks; Western spring bran, $44.50-45; standard middlings, $56; flour middlings, $60-62.50; red dog, $68-68.50, all in 100-pound sacks, 30-day shipment. Oat feed, $32.50; rye middlings, $45; white hominy feed, $73, all in 100-pound sacks. Cottonseed oil meal, nominal; linseed oil meal, nominal, in 100-pound sacks.

Hay and Straw.—No material improvement in values. Small baled hay still plenty and values considerably lower than large.

Hay.—No. 1 large bales, $37-39 ton; No. 2, $33-36 ton; No. 3, $27-30; Shipping, $22-26 ton. Fancy light clover mixed, $34-36 ton. Clover, No. 1 mixed, $30-31.

Straw.—Per ton, No. 2 rye, $13.

Wheat.—No. 2 red, $2.37½. No. 3 hard winter, $2.37½.

Corn.—No. 2 yellow, $2.11¼. No. 3 yellow, $2.10¼.

Oats.—Standard, 90½c.

Rye.—Export, $1.72.

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PHILADELPHIA DAIRY MARKET

Philadelphia, Pa., July 21, 1919.

Butter.—Receipts, 2,604 tubs. The Produce Exchange was closed and there was not much wholesale trading. Prices were nominally unchanged. We quote:

Fresh, solid-packed creamery, extra, 55c; high-scoring goods, 56-58c, the latter for jobbing sales; extra firsts, 54c; firsts, 52-53c; seconds, 50-51c; thirds, 46-49c; sweet creamery, choice and fancy, 57-59c; do., fair to good, 52-56c; ladle-packed, as to quality, 47-48c; packing stock, 44-45c; fancy brands of nearby prints jobbing at 61-63c; good to choice, 55-60c; fair, 51-54c.

Cheese.—Firmly held. We quote: New York and Wisconsin flats, current make, choice, 32¾-33¼c; specials higher; fair to good, 31½-32½c; jobbing sales of fancy goods, 34-35c.

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NEW YORK MILK MARKET

New York City, July 21, 1919.

Business fell off somewhat last week and surplus unusually large for this time of year. Nearly all of the large distributers manufacturing. The rate for July in 200 mile zone for 3 percent is $3.01 per 100 lb.; 3.06 percent milk is $3.25 and 4 percent $3.41.

Receipts of milk and cream in 40-quart cans for the week ending July 19, 1919, were as follows:

Railroads	Milk	Cream
Erie	39,862	5,210
Susquehanna	6,894	184
West Shore	16,370	2,323
Lackawanna	61,139	4,040
N. Y. Central (long haul)	170,768	4,579
Ontario	45,840	1,863
Lehigh Valley	54,376	1,728
New Haven	6,820	75
Pennsylvania	12,275	484
Other Sources	6,400	250
Totals	420,744	20,705

WOOL MARKETS

The Boston "Commercial Bulletin" of July 19 says: "While the market has been somewhat quieter at the seaboard markets, the undertone is very strong and prices are firmly maintained. In the west, buying continues with prices fully as high as a week ago. The goods market is without material change, demand being less insistent."

Ohio and Pennsylvania Fleeces.—Delaine washed, 85-88c; delaine unwashed, 82-83c; fine unwashed, 61-62c; ½-blood combing, 73-75c; ⅜-blood combing, 68-70c.

Michigan and New York Fleeces.—Fine unwashed, 50-60c; delaine unwashed, 78-82c; ½-blood unwashed, 70-72c, ⅜-blood unwashed, 67-69c.

Wisconsin, Missouri and average New England.—½-blood, 67-68c; ⅜-blood, 65-67c; ¼-blood, 63-64c.

Virginia, Kentucky and Similar.—½-blood, unwashed, 75-77c; ⅜-blood unwashed, 70-72c.

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TOBACCO MARKET

In all tobacco localities of our country the new crop now has been transplanted and in many places is well under way. Upon the whole, however, the outcome is quite distant and uncertain, the outlook being exceedingly variable. On thousands of acres plants are yet so small as to be invisible from a distance, and an aggregate of thousands has died and cannot now be replaced. The Federal Department of Agriculture has just estimated the acreage at 1,774,300 acres, the condition at 83.6 and the probable production at 1,453,000,000 pounds. Thus the acreage production per acre would be 819 pounds. The acreage has been increased in the burley section and other places growing plug types, this owing to the unusually high prices at which most of the 1918 crop was sold. In the cigar localities the situation is just the opposite, the acreage being much less than heretofore owing to the continued low price of cigar tobacco. Thus by law of extremes it would seem that the outlook for future prices is relatively better for cigar than for burley tobacco. Those holding the product of the past year may expect further advances and those growing a new crop of cigar tobacco may be advised to refuse early offers to contract while tobacco is yet in the field. Owing to the promising situation speculative buyers will soon be endeavoring to thus bind the unsuspecting grower to sell his 1919 product on a basis of present values. Sales of cigar leaf tobacco during the week were not extensive but values were well sustained in all instances. There is yet a large part of the crop unsold.

Veterinary

Conducted by W. C. Fair, V. S.

Advice thru this department is free to our subscribers. Each communication should state history and symptoms of the case in full, also the name and address of writer. Initials only will be published. We cannot make reply by mail. This is one of the most valuable columns of the paper and we invite readers to make use of it. Clippings from this column, when properly preserved and classified, make one of the most valuable medical symposiums a farmer-stockman can obtain.

Chronic Cough.—Holstein steer 2 years old came in from pasture last fall covered with lice. I killed the lice, but ever since he has been coughing more or less and has not thrived. What shall I do for him? E. C. S., Findlay, N. Y.—Give him ¼ dr. ground nux vomica, ½ ounce ground gentian and one ounce powdered licorice at dose in ground grain three times a day.

Blind Stallion.—I would like to know if anything can be done for a stallion that is blind? He is 5 years old, gentle, but is inclined to be ugly, even when working with mare in double harness. A. B., New York City. This is a case which should not be treated by mail. Show him to a qualified veterinarian and abide by his decision. I am inclined to believe he is incureable.

Horse Scours.—I have a horse that has good appetite for food, and so far as I can tell he is not sick, but when standing still or exercising his bowels act too freely. W. N., Green Bank, N. J.—Instead of controling his bowels by giving him drugs it had better be done with food. His grinder teeth may require floating; if so, have it done by a veterinarian, or if you do it yourself, file off the sharp points of inside of lower rows and outside of upper. Feed one part dry wheat bran, four parts oats and well cured timothy. Feeding him some grass will do no harm. Give him a small teaspoonful of dry powdered sulphate of iron in feed three times a day.

COUNTY NOTES

Lebanon, Pa., (SE) July 14.—Seasonable July weather this week with several much needed rains. The wheat harvest is practically over. The stand was good but several who have threshed report the yield as quite disappointing. Hay was a fair crop but not as good as last year. Corn looks well and is growing rapidly. Oats will be ripe in a week; some sooner. Potatoes are doing well this year, especially early varieties. some farmers have started plowing for the autumn sowing. Harvest wages ranged from $2.50 to $3 per day and board. The more liberal farmers had no trouble in securing labor, while the ones that paid the lower figure had considerable trouble in keeping their men.—Leonard F. Strickler.

Mifflin Co., Pa., Center.—Weather had been extremely hot for two weeks previous to July 7, when we had a few showers. Had fine harvesting and haying weather till the 10th when we had a heavy rain storm which made the ground soft and did some damage to the corn. Wheat made a wonderful amount of straw, but is not believed to yield a large crop of wheat. Nearly all hauled in. Plenty of hay to make yet, which is selling for $20 a ton from the field. Crop fairly good. Produce and grain: Wheat, $2.10; corn, $2; oats, 75c; rye, $1.50; butter, 50c; eggs, 44c; lard, 30c; ham, 40c.—J. H. Byler.

WANT SIDE ROADS FOR HORSE TRAVEL

The Washington County Agricultural Association has appointed Mr. Harvey S. Bomberger as chairman of a committee to wait upon the State Road Commission and urge the necessity of side roads on the state highways for horse travel. So great a number of automobiles are now on the roads that it is unsafe to drive a horse and the smooth, hard roads are scarcely fit for teams drawing heavy loads. As Washington county has recently purchased the toll pikes, new state highways will be constructed there and the urge for side roads for horse travel is especially timely and pertinent.—Marylander.

The No. 240 Andes One Pipe Furnace installed in 1918 has given perfect satisfaction. For ten rooms and bath I have burned less coal than when using a coal stove.—John Wolf.
Verysburg, N. Y., April 7, 1919.

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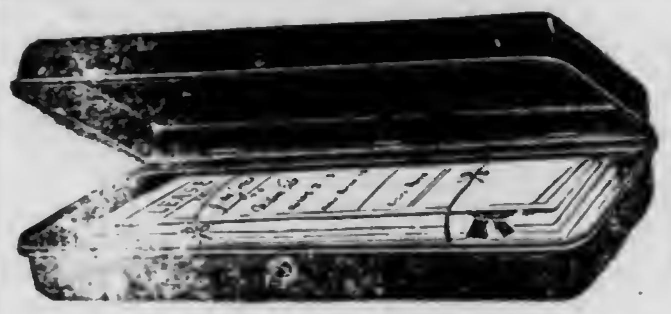

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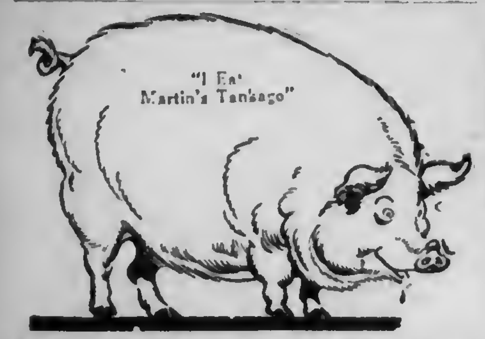

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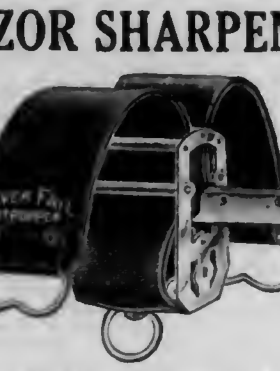

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LIVE STOCK

TIOGA COUNTY BOY WINS JUDGING HONORS

Orrie Cummings, of Tioga County, Pa., was the winner of the highest score at the State-Wide Judging Contest participated in by ten teams of five boys each from ten counties at the recent Pennsylvania State College Farmers' Week. Mr. Cummings won a total of 370 points out of a possible 400, having succeeded in correctly placing the four rings of cows, horses, sheep and hogs. The winner is 17 years of age and is now a member of the Junior Class of the Wellsboro High School. He is a son of Claude Cummings, of Middlebury Township, a prosperous dairyman of Tioga County.

Orrie Cummings, Tioga Co., Pa., Winner of Judging Honors

This is not the first time that young Cummings has won honors in stock judging. He was a contestant in judging at the Mansfield Fair in 1917 but gained nothing in that event but experience, which later stood him in very good stead. Last summer the County Holstein Breeders held a picnic which was featured by a cow judging contest for young and old; the prize donated by the secretary of the County Holstein Association to the person who took first honors in judging was a purebred Holstein bull calf. This was won by Orrie Cummings. Following this achievement, he purchased a Holstein heifer and is thereby one of the youngest breeders of purebred Holsteins in the state.

Last September 50 contestants entered the Live stock Judging Contest at Mansfield Fair where attractive prizes were offered. This time Orrie Cummings was awarded second honors and received a purebred sheep donated by the More-Sheep-More Wool Association of Pennsylvania. Tioga County is justly proud of her young live stock judge who for the third time has demonstrated his ability in such an interesting way. Young Cummings is planning to take a course at Pennsylvania State College upon completion of his high school training.

ARMY PRACTICE IN FEEDING HORSES

The army feeding practice follows the standards set by such feeding experts as Henry and Armsby and countless practical stockmen, namely about one pound each of grain and hay for each hundred pounds of live-weight. The standard ration for a 1300 pound horse is 14 pounds of grain and 17 pounds of hay, for average conditions. If the animal is idle or doing very light work, two-third of the total 31 pounds is hay. If at medium work, half and half are used, and for hard work two-third grain is used. For extra heavy work an increased ration is allowed.

Too many horses are fed the same ration when idle as when at work, with the result that colic, indigestion, founder, azoturia or lymph angitis result. It stands to reason that an idle animal cannot assimilate and dispose of the same nutriments as a working animal. Perhaps many farmers would do well to follow the army example of using oats as the chief grain. Oats are not fattening and therefore do not produce soft condition, but are sufficiently nourishing to furnish the energy for hard work and keep up a good condition of flesh. Horses that are fed oats do not sweat so freely and do not lose so much flesh when put to hard work in the spring. Feeding experts report that the ideal grain ration for the horse is a mixture of equal parts of corn and oats by weight.

THE HORSE COLLAR

The collar should be just large enough to permit a man's hand to pass inside the collar between the lower end of the collar and the neck or breast of the horse. If the collar is too loose it will cause friction; if too tight it will choke the horse, and cause sore withers. Test the fitting of the collar by lifting up the horse's head.

The hames should fit the collar; if too long, they will probably be buckled too tight at the top, and in this way the collar will be made to pinch the horse at the top. Sores thus produced begin by a pimple or very small boil, often overlooked because the mane covers it. Examine your horses continually, and if there is any sore spot, adjust the collar so that it will not touch that spot. If the skin is merely wrinkled, bathe it with witch hazel or diluted vinegar. If the skin is broken, bathe it with clean water, containing a little salt.

If the collar "rides up," it can be kept down by a martingale running to the girth, or by an extra girth running from trace to trace, back of the forelegs. The best collar for a mature horse, whose weight does not vary much thruout the year, is the leather collar. But for most horses, the best collar is one stuffed with hair, and covered with ticking. With this collar, if the horse's shoulder becomes sore at any point, the lining of the collar can easily be ripped, and the hair removed or pushed aside at that point, so that no pressure will come on the sore place.

Collar pads are much used, but they quickly become dirty, cannot easily be cleaned, and thus cause many sores. Still a pad that makes the collar fit is better than an ill-fitting collar without a pad.

By all means, clean the inside of the collar every night. If you wait until the next morning, you are likely to forget it or be too rushed to do it carefully. Of course you will clean the horse's shoulders as soon as the collar is removed. The salt sweat drying on the skin is what does the mischief.

RAPE PASTURE AIDS IN LAMB PRODUCTION

By providing good pasture crops for lambs after weaning and by using an annual pasture crop a set-back in growth may frequently be avoided and the lambs marketed at an earlier age, according to tests in lamb production at the Ohio Experiment Station. It is also found that the use of annual pasture crops either to replace or supplement permanent pastures by frequently lessens the damage done by intestinal parasites.

Rape as a forage crop for sheep carried 22 lambs to the acre 183 days and produced 576 pounds of gain per acre. Rape is often used to supplement bluegrass pasture, which may become short during hot spells. When the gains to the acre are considered rape has given higher gains than clover, rye or bluegrass. Several tests show that an acre of rape pasture may produce from $40 to $50 worth of mutton when lambs are valued at $15 per hundred pounds.

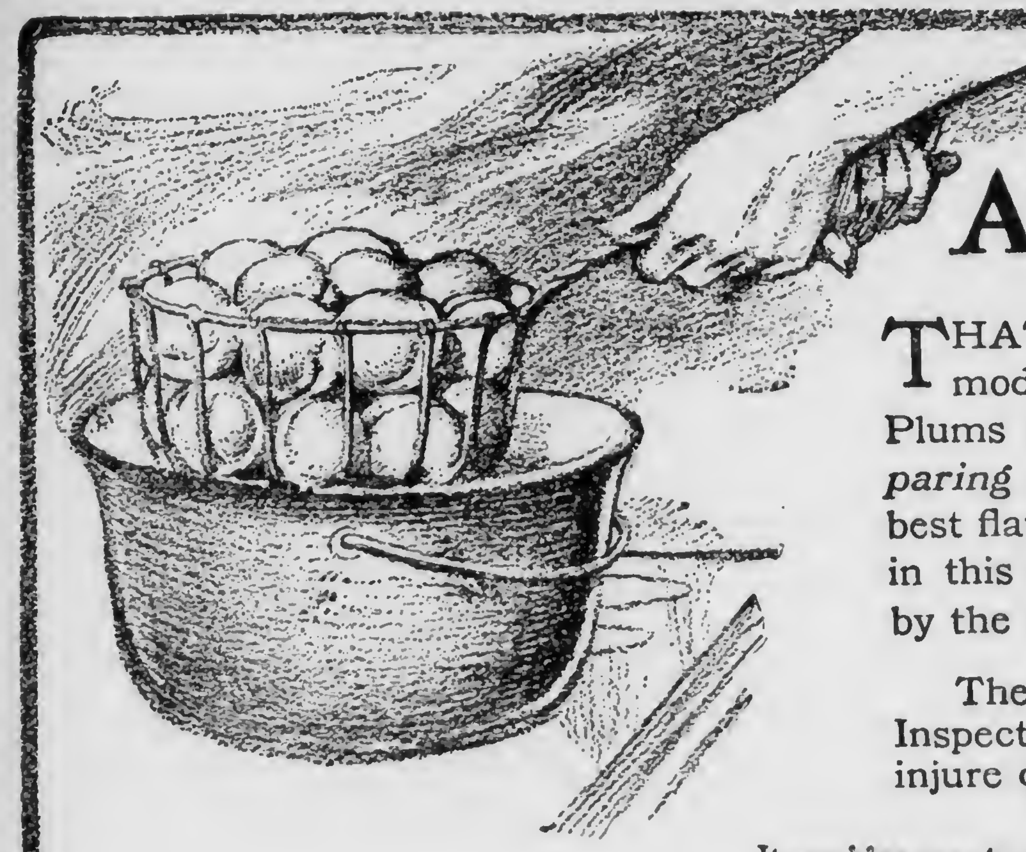
More labor is required with annual forage crops than where permanent pastures are used, but it is pointed out that in sections of the state where land is relatively high in price the greater production per unit of land may be more than sufficient to offset the greater labor cost.

SKIM MILK FOR HOGS

The farmer who has a surplus of skimmed milk is just the man to take up the raising of hogs, for skimmed milk has remarkable feeding value, and can be used to the limt. Some careful experiments to determine the value of skimmed milk when fed to hogs have been carried out and the reports are interesting. One test was made with three sows (mother and two daughters) bred to the same boar at about the same time so that there were thirty little pigs just about the same age, and as near alike as possible. These were divided into five lots and fed as follows: 1st, fed skim milk and wheat middlings; 2nd, fed skim milk and corn meal; 3rd, fed skim milk, corn meal and wheat middlings; 4th and 5th, fed different combinations of wheat middlings, corn meal and meat meal, but no skim milk.

The first three lots all did nicely, gained in weight, with little difference noted as to the combinations of feed they received. At nine months they weighed from 220 to 230 pounds. The last two lots which received no skim milk made very slow gain, only one making a satisfactory gain. This one weighed 140 pounds. The others weighed from 65 to 115 pounds.

The first three lots were fed green food. The last two were not. Those without the milk stood still for a long time. They didn't have the material to build a frame on in a form which they could utilize. As they got a little older they were able to handle it better and made some gain. Skimmed milk and middlings, in the proportion of four pounds of the former to one of the latter, make an excellent hog ration.—E. I. F.



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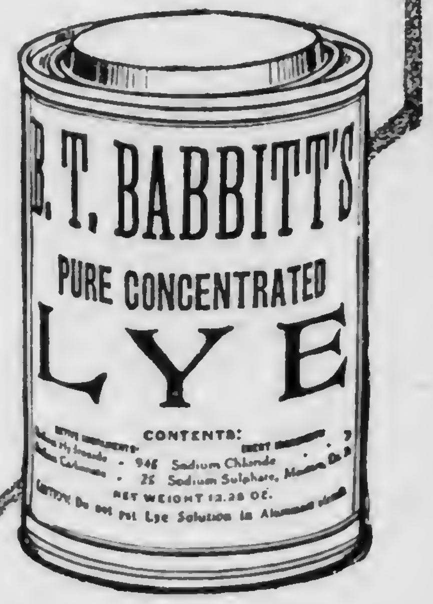

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PENNSYLVANIA FARMER
AGRICULTURE THE KEYSTONE OF NATIONAL PROSPERITY
ESTABLISHED 1880
PUBLISHED WEEKLY

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Inoculation For Legume Crops

Comparison of Inoculating Materials And Methods of Applying

By J. B. R. DICKEY

NEW JERSEY

The manufacture and sale of commercial inoculants has grown during the past ten years from the purely experimental stage to a business involving many thousands of dollars annually. The principal of artificial inoculation of legumes is sound from both a scientific and practical standpoint, and the introduction and rapid spread of new crops such as alfalfa, vetch and soybeans has created a real need for commercial cultures, since the nodule forming bacteria of these crops are seldom originally present in the soil. Methods of growing and holding the bacteria in various carriers, such as jelly, muck, etc., have been successfully worked out and where proper care has been exercised results have been highly satisfactory. Agriculture owes much to the commercial inoculant industry, and if properly conducted, it has still a large, valuable and profitable field.

Tractor on Eight-Foot Mower Doing Fast Work in Well-Grown Alfalfa

During the past year or two, however, persistent reports of the failure of commercial cultures have been coming in. When a culture fails consistently on a large number of farms, something besides adverse soil conditions must be wrong and tests in the bacteriological laboratory and in scientifically conducted experiments have repeatedly shown some widely advertised cultures to be absolutely sterile or so poor as to be practically worthless. Several experiment stations have conducted laboratory tests of numerous brands and have invariably found some of little or no value. Some brands have been repeatedly proved worthless but still these companies continue to manufacture and sell to farmers. Carelessness at various stages of manufacture, age or the use of poor materials is doubtless responsible for the death or absence of the necessary bacteria.

No Satisfactory Guarantees

Without careful laboratory or pot tests at frequent intervals, no manufacturer can know with certainty whether a culture is good or not, and apparently few, if any, commercial companies make any systematic tests of their product. They may therefore continue to put out and sell a worthless article almost indefinitely. The writer has several times called the attention of companies to the repeated failure of their product and to the further proof of its worthlessness by laboratory tests. So far he has never received even an acknowledgment of the receipts of his letter, much less any assurance that steps were taken to rectify the trouble.

While some companies claim to guarantee that their cultures will produce nodules, this guarantee is of little or no value. Few farmers would attribute the failure of the crop wholly to worthless inoculant or would investigate to determine the actual presence of absence of root nodules. Even were the purchase price of the culture refunded where the crop fails, it would be insignificant compared to the loss of seed, labor and use of the land. Altho a legume crop sometimes makes a fair growth without inoculation, as in the case of soybeans on a rich soil, it has lost absolutely its value as a legume to secure atmospheric nitrogen and thus grow thriftily and enrich the soil. Alfalfa and vetch never amount to anything unless the nodules are produced on their roots, and the yellow color and short life of the alfalfa and the slow growth and generally disappointing performance of the vetch, which are so common, are generally due to the absence of the necessary bacteria. Where legumes are grown for soil improvement or on soils naturally too low in nitrogen to produce a non-legume crop, failures from lack of inoculation are most pronounced and discouraging.

The literature of manufacturers and the "line of talk" of salesmen is often more amusing than convincing to one who understands the fundamental principles of inoculation. For instance, it is seldom if ever worth while to inoculate the seed of common clovers such as red and alsike, and when once a field has grown the desired crop it is not necessary to inoculate the seed again on this land, at least for a considerable number of years. After a crop becomes quite commonly grown the bacteria are spread so generally by blowing dust, manure from stock to which the crop has been fed, etc., that artificial methods are only necessary at the start. Many circulars and salesmen however, give the impression that no legume crop should ever be planted without the use of their particular culture. When some purchaser of inoculant examines the roots of red clover or cowpeas for the first time and discovers abundant nodules he is apt to express his pleased surprise in a glowing testimonial. The nodules would probably have been there from natural sources without the use of the inoculant, but the artificial culture gets all the credit. All inoculant literature and salesmen rightly emphasize the need of lime for success with clover, and many advise liberal fertilization. Either treatment might be responsible for the improvement noted in testimonials and attributed solely to the bacteria supplied.

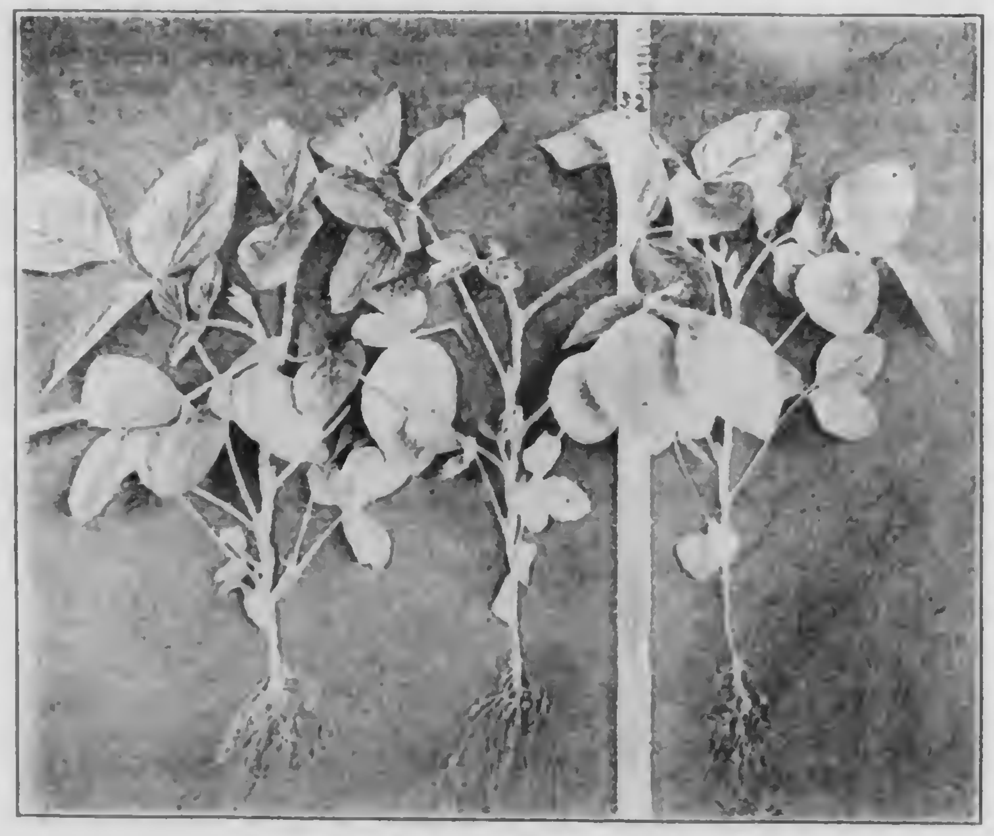
A favorite theme of some manufacturers is the "high breeding" of their particular bacteria. The object in inoculation is simply to infect the roots of the legume with a germ "disease" and it is reasonable to suppose that the simplest and least artificial methods will give the best and surest results. High breeding, etc., seems unnecessary providing it were possible. Nature is a pretty good breeder herself; only the strongest and most virile can survive her methods and a well limed and fertile soil is probably the best home for legume bacteria yet discovered.

Many manufacturers now put out a socalled "all crop" inoculant which is supposed to contain sufficient legume bacteria of every kind to inoculate any legume crop. If carefully put up and used in ample quantity, the principle might be sound, but observations on the use of these all-crop inoculants seem to show them even less reliable than the pure cultures. One much advertised brand last year appears to have failed absolutely to inoculate soybeans and vetch and to have given but indifferent results on alfalfa, altho the company claims to test each lot of culture. Such cultures may be a little like patent medicines which are claimed to cure any disease, from rheumatism to consumption. It is generally better to suit the medicine to the disease. If one must depend on commercial inoculants it would seem a better policy to secure cultures for the particular crop desired, save possibly where a mixture of legume seeds are sown.

Claims are also made that these all-crop cultures will benefit the growth of non-legume crops to a wonderful extent. It is true that there are certain bacteria which have the power to transform free nitrogen into a form available to plants without being associated with legumes or any other crops. However, the practical value of introducing these bacteria is questionable. They are probably already present in most soils, so that the addition of a few more will make little or no difference. Apparently, therefore, not much importance should be attached to these claims. So far as known, there are no nitrogen-fixing bacteria associated with any non-legume crops.

While testimonials regarding the miraculous results secured on non-legume crops are often printed, these are not generally very specific in their statements. Personal investigation of one signed by a county agent showed that his name had been used without his knowledge or consent, and the testimonial reprinted in spite of his protests, and that after repeated trials he had seen no evidence of the value of the material referred to.

The latest inovation seems to be the proposed, or actual putting on the market, of inoculated fertilizer and inoculated ground limestone and hydrated lime. While this might be workable in the case of the ground limestone and some organic or non-active fertilizers, such as raw phosphate rock, the caustic effect of the lime and of most mineral or acidulated fertilizers in close and continued contact with the bacteria, would certainly be more or less injurious if not fatal. At all events there would be little to gain from the use of such mixtures and one might rest assured that he was paying the manufacturer a high premium over the fertilizing value of the material for the privilege of taking a chance on its being also able to inoculate some crop.



Young Soy Beans Showing Root Nodules

Courtesy of Del. Expt. Station.

The prices asked for commercial inoculants are also interesting. The range is from 50 cents to $2 for enough to inoculate one acre. So far, tests and actual reports show the 50 cents material is as good in quality and as ample in quantity as that costing four times as much. The U. S. Department of Agriculture and numerous state experiment stations have sent out inoculants in small or large amouats free or at a nominal charge of about 25 cents per acre. Their facilities, however, have generally been overtaxed so that deliveries were often apt to be slow and uncertain. If the commercial concerns would put out a guaranteed and reliable article it would be well worth the highest price charged, but experience shows that brands which are good one year or one month may be absolutely or practically worthless the next, and many lots are dead of old age before they reach the consumer.

No Official Control

Some years ago an attempt was made to test these cultures systematically at the New Jersey Experiment Station and to get out annual reports on their value. The war caused a shortage of help in the laboratory, however, which forced the abandonment of the project, at least temporarily. Recently a bill was introduced in the New Jersey legislature providing for the testing and reporting of legume cultures along the lines applied to the sale of seeds and fertilizers. This measure was passed and some improvement in inoculants, or at least the showing up of the worst offenders, may be hoped for in the course of a year or so if the provisions of the measure are carried out.

At present, just as the farmer begins to realize the value of such crops as alfalfa, vetch and soybeans, and to appreciate the necessity of inoculation, there seems no way for him to secure commercial inoculants which can be relied upon. Some suggest using several brands of culture on the seed at the same time so that if one is useless, inoculation may still be effected. There is no objection to this plan save the added and unnecessary expense. Fortunately, however, the farmer is seldom entirely at the mercy of careless manufacturers.

Inoculation With Soil

The transfer of soil from old legume fields is the oldest and most reliable method of inoculation yet devised. Before anything was known of legume bacteria, it was discovered and recognized in the old countries that the spreading of small amounts of soil from old, fertile fields on more or less barren moorlands was an important factor in the success of legumes sown there for the first time, when the improvement of such soils was undertaken by means of liming and fertilization. The new legume crops are now generally well enough distributed so that soil from an inoculated field can be secured in almost any neighborhood, especially if the county agent is consulted.

Much has been said against the transfer of soil (especially by the agents for commercial inoculants) on the ground of the danger of spreading weed seeds and crop diseases. However if the soil is taken from clean, healthy fields, there is little risk and inoculation is sure and thoro where soil from a field showing abundant nodules is distributed evenly and harrowed in without long exposure to the hot, summer sun. The labor involved in transporting large amounts of soil considerable distances and spreading it evenly over new fields is something of a drawback, but a few hundred pounds of sifted soil per acre answers the purpose equally well, if put in direct contact with the seed by drilling it in with the fertilizer attachment. This also insures more even distribution than shovel or hand spreading.

Soil and Glue Method

Another plan which requires still less soil and no extra labor in spreading is to moisten the seed slightly with a very thin glue, made by dissolving a 10 cent bottle of commercial glue in about a quart of water and immediately stirring in the sifted soil until each seed is well coated. If the soil is fine and if only enough glue water is used to thoroly moisten the seed, it can be sown almost at once with any seeder or drill without difficulty. This method works best on the larger seeds, but has been used very successfully on alfalfa sown alone or with clover in the spring on winter grain. Some use diluted molasses instead of glue. Where the soil is clayey, a thin mud is sometimes simply made of it and this poured over the largest legume seeds and allowed to dry on them. Bacteriologists tell us that a teaspoonful of fertile soil may contain many millions of soil bacteria, so that a few soil particles per seed will carry sufficient germs for inoculation. Where the soil is stuck directly to the seed the bacteria are covered so as not to be exposed to the hot sun and are right on the job, ready to infect the roots as soon as they start to grow.

Crops Requiring Inoculation

Sweet clover and alfalfa utilize the same bacteria so that soil from patches of sweet clover may be used to inoculate alfalfa fields. Both of these legumes seem to almost invariably require inoculation on new fields, altho lack of sufficient lime is another very common cause of failure with both crops. Some farmers trust to securing inoculation in time by sowing a small amount of alfalfa every year with their clover, depending on the bacteria which may happen to be adhering to some of the seeds, especially if the seed is dusty or dirty. Life is too short for this method with most of us, however, when thoro inoculation can be gotten the first year by the use of a little inoculated soil and some glue.

Where market, canhouse or Canadian field peas have recently been grown, expensive inoculation does not always seem necessary for vetch, but lack of inoculation is the common cause of most failures with vetch as a cover crop. Inoculation will also probably pay on common and Canadian peas altho information on this subject is limited.

Soybeans always seem to require inoculation when first grown and no other common plant uses the same bacteria. Commercial cultures have been notoriously unsuccessful on soybeans, partly because the beans are smooth and slippery and partly because their bacteria seem hard to propogate and keep under artificial conditions.

Good results have also been noticed from the inoculation of field and lima beans. Soil from old gardens where peas and beans have been grown for years will probably serve for the inoculation of peas and the common sorts of beans in the field.

Cowpeas require inoculation in the northern part of New Jersey but generally show nodules naturally in the central and southern parts of the state. They have been grown there to a considerable extent and some wild legumes probably have the same bacteria.

Crimson clover uses the same bacteria as the other common clovers, such as red, alsike and white, and, save possibly where no clovers have grown for many years, inoculation is never required. Soil acidity and possibly the lack of plant foods such as phosphric acid is commonly the limiting factor in the growth of these clovers. If enough lime and phosphate is supplied, inoculation will generally take care of itself.

The fact is often remarked that the second time a field is put into a legume crop requiring inoculation stands are much more easily secured, growth is much more rapid, the color of the crop is better and nodules are much more abundant, even where artificial inoculation was attended to on the first trial. This is no doubt due to more thoro distribution of the bacteria and more prompt and adequate inoculation. So one should not be discouraged with poor or only fair success on first attempts.

Plant Diseases Reduce Yields.—The problem of reduced yields is not altogether a matter of plant-food exhaustion. "Decreased yields are partly due to plant diseases infecting the soil and the seed" says Prof. H. L. Bolley of North Dakota Experiment Station who has given this subject careful study. Simple remedies for preventing such losses are proper rotation of crops, grading and fanning, seed and planting only sound, plump grain, treating infected seed with formaldehyde or other poisons to kill the disease spores, giving the soil deep and thoro tillage, drainage and aeration, by which the diseased germs are eliminated, and maintaining a high state of fertility in the land in order that the crops may resist the attacks of disease.

Weak Points in Farming—III

Poor Business in Farming

The statement that farming as a whole, is conducted on an unsound business basis seems to be a very broad assertion to make. But if we compare the "business" side of farming with the "business" side of manufacturing. We find this to be true: That the farmer takes what he can get for his products, while the manufacturer sets the price on his. In other words, the manufacturer sums up every item of cost which enters into his goods, and adds a profit just or otherwise to set the selling price. This holds true for the merchant, and others, as well. They all make their profit on the commodities they handle. The farmer, however, sells his products without reference to the cost of production, and whether he makes a profit or not is largely a matter of chance. He does not set the price. The buyer does it! He does not say "So much!" but "How much?" No city business would last six months if it sold its wares without reference to or knowledge of the cost of producing them, or allowed the buyer to set his own price on the goods he bought. Yet the business of farming has been largely conducted on that basis in the past, and still goes on in the same way. The farmer has used unpaid and underpaid labor, and has worked long hours; he has had food, fuel and shelter without an outlay in money for them, and so has got along. If he had been compelled to pay his children and his hired man a high wage and been limited to an eight hour day, if the butcher, the grocer, the coal dealer, and the landlord had each presented a monthly bill for the things his farm furnished him, he would have been forced to quit long ago. In spite of the popular delusion that farming is a nice, easy, independent life, the farmer has harder work, longer hours, less freedom, more responsibility and less return on his investment than any city business man to whom he can be compared. The natural result is that the younger generation is attracted to the city, where a definite income, short working day without responsibility after hours, and better living conditions can be had. The city man need have no investment in property unless he cares to, and life can be pretty easy in comparison to that on the farm—without a comparison of merits. The result of such conditions is that a good many owners are giving up. In my own immediate neighborhood, most of them in sight of my own farm, ten farms or more have changed hands this spring! Such unstable conditions show the state of affairs, and lead to disaster. When farming is as attractive and profitable as a city business it will on that account become stablized.

The Remedy: Cost Accounts and Selling Associations

"Work out your own salvation," is the ancient admonition. It is a sermon preached directly to the farmer of today. He must fight his own battle for a fair price for his products, and fight hard. The mere statement that conditions are wrong will not right them. The buyer will pay as little as he can, whether he purchase onions or automobiles, and only necessity will make him pay a fair price.

The first step for the farmer to take is to start a system of cost accounts. It is essential to know pretty nearly what a bushel of wheat or a sack of potatoes costs to produce, before any idea can be had as to the price for which it should sell to yield a profit. Most farmers keep some sort of an account with their farm as a whole. They know whether they have made or lost money at the end of the year; but just what crops are profitable and which are not, cannot be found out. If an account is kept with each important crop or kind of stock kept, it is possible to determine at the end of the year which are gainers and which are losers. Crops should be charged with use of land, interest, all labor involved, manure, fertilizer, seed, freight, etc., and credited with all products sold or used. Animals should be charged with their value at the beginning of the year, interest, use of buildings, labor, etc., and credited with their value at end of year, all products sold, manure, etc. Any book on farm management will give the details, and there are government bulletins to be had free, on the subject. Such a system will not only give a pretty close idea of the cost of production, but other valuable information as well. The accounts should be kept as simple as possible, because they require considerable work at best—work that must be done, however.

A 78-Year-Old New Jersey Farmer. The Old Way

The second step that is necessary, if the farmer is to get a fair price for his products, is the formation of selling associations, to help him market his crops. The average farmer has neither the time nor the knowledge of markets to do this to best advantage himself; neither can he ship in large enough quantities to attract the attention of the buyers. An association, however, can determine the best market, can ship by the carload, can furnish a graded product, and can do a great deal to keep up prices. It may even establish the price as it should. There are examples enough to show the good results of such associations, but room for a host more.

The Modern and Better Way

Organization puts California oranges on the Eastern market cheaper than any individual grower could do it, and organization has given the cream of the Eastern apple market to the Pacific Northwest. We read that the Southern cotton growers have banded together to limit the cotton crop, so that a profitable price level may be maintained. In the East, the Dairymen's League has given the milk dealers a hint of its power. No city manufacturing enterprise or business house could be successful without a strongly organized selling department; and it is the lack of proper selling facilities that has been one great weakness of farming.—R. L. Scharring-Hausen.

Stories in Farm Law

If a Fire Starts Before the Insurance Policy Expires, But the Buildings Are Burned Afterwards, Is the Insurance Company Liable?

By A. B. BROWN.

Suppose a farmer has an insurance policy on his farm buildings which expires at noon on, say, the 31st day of July, 1918. At half past eleven in the forenoon of the 31st of July a fire breaks out in the insured buildings, the farmer, with the assistance of his hired help and the neighbors, make every effort to extinguish it, but it gains headway, at twelve o'clock it is burning merrily, and by one o'clock the buildings are totally destroyed.

Then the farmer claims the face of the policy from the insurance company.

"We won't pay," says the company, "for our policy expired at noon, and the loss occurred afterwards."

This, it may be said, is an imaginary instance, and is a case that could never occur. If a policy expires on a certain day, and a fire breaks out, it is sure to occur some time before or some time after the expiration of the policy, and the supposed case could not happen once in a thousand years.

As a matter of fact, however, it did happen in a case in Kentucky, and the point came before the Kentucky Court of Appeal, which decided that the insurance company was bound to pay.

"If the fire broke out in the insured building before the policy expired," said the Kentucky Court of Appeal in deciding the case, "and continued to burn thereafter till it was totally destroyed the loss is one occurring within the insured period. It is all one event, and not separable. A damage begun is damage done, where the combination is the natural and unbroken sequence from the beginning."

Or again, take a little different case. Suppose that two farmers, Jones and Smith, own farm buildings situated very close together, and the policy on Smith's buildings expires at noon on a certain day. At about half past eleven on that day fire breaks out in the Jones buildings, and, while Smith's buildings are not on fire by twelve o'clock, it is absolutely certain that they will be destroyed, as the fire in the Jones buildings is beyond control and there is no possibility of saving the adjoining buildings.

About half past twelve the fire spreads from the Jones buildings to Smith's which are utterly destroyed, and Smith then claims the amount of his insurance from the insurance company.

The Company refuses to pay on the ground that the policy had expired when the loss occurred, and the question is whether the insurance company can be compelled to pay.

In the same case which we have mentioned the Kentucky Court held that the insurance company was not liable in this case, as the fire must actually be under way in the insured buildings before the expiration of the policy in order to render the company liable.

"The risk assumed by the insurance company was that of loss or damage by fire during the term written in the policy," said the Court on that point. "It did not insure against damage to the property without loss during the term of the policy. We have been cited to no case which holds that mere imminence of loss during the life of a contract of insurance would justify a recovery where there was in fact no loss or damage

(Continued on Page 4.)

Farm Products Prices and Prospects

WET WEATHER DAMAGE

The twelve-day rainy period which covered the eastern section of the Middle Atlantic States from July 10 to 23 evidently did so much damage to some crops that Pennsylvania Farmer sent a letter of special inquiry to nearly 100 county agents in the territory, asking for an estimate of the damage done. Up to the time of going to press, the following answers have been received. Others will appear next week.

Maryland

Carroll Co., N.—About 40 percent of the wheat in the field, all of which is ruined. Most of the oat crop is down and will be hard to gather and much will be lost. Corn stalks full of water and ground soaked, but if weather keeps calm damage will not be great. Early potatoes were fine and large percent dug. Those in ground taking on second growth. Most of clover hay down and rotted. Timothy over-ripe. Fruit knocked off trees. Tomatoes delayed.—F. W. Fuller.

Cecil Co., N. E.—About 65 percent of the wheat was in the field, about half of which was properly shocked; of this, 50 percent may be saved. Much damage was done to oats; in some cases it was all destroyed. No damage to corn except where it was flooded. Early potatoes are rotting. All hay which was cut is absolutely rotten. Tomatoes damaged on flooded fields.—J. H. Knode.

Baltimore Co., N.—Probably 60 percent of the wheat was cut, two-thirds of which is badly damaged. Very little damage to oats, and practically none to corn. Potatoes are about an average. No blight nor rot has been reported. Only about 50 percent of the hay made. Most all crops were beaten to the ground but outside of wheat, damage is small. Threashers report wheat yielding eight bushels per acre where 25 or 30 was expected.—J. F. Hudson.

Worcester Co., Md., (SE)—About 40 percent of the wheat crop of the county was in the field during the recent rainy spell. Of this about 25 percent is badly damaged. Corn suffered no damage. Potatoes are certain to suffer, but amount of damage cannot be estimated at this time. Hay is all made here so was out of the way.—E. I. Oswold.

Prince Georges Co., Md., (C).—The recent rains caught this county with at least 50 percent of the wheat in the fields. One-third of the wheat thus caught is sprouted or will be tough. There was no damage to corn; it made good growth during the rains. Early potatoes are poor here. Late potatoes are just being planted, being late because of the extremely dry weather before the recent rains. Hay was practically all secured before the rains, so little damage was done. All tomatoes on vines during the rains either cracked or rotted, but vines are uninjured and new fruits should be all right.—C. H. Taylor.

Washington Co., (NW).—About 20 percent of the wheat was in the fields during the recent rains. In some sections perhaps 10 percent of this sprouted. Generally small damage was done to the wheat here. Oats are still uncut and no damage was done. No damage was done to corn except on the steepest hillsides where there was considerable washing. Corn generally fine. Early potatoes are yielding 90 to 95 percent of full crop. Late potatoes are very thrifty. Alfalfa and mammoth clover hay was damaged perhaps 10 percent; other hay not materially affected. Peaches benefitted in size thru the rains, but rots and other fungous diseases were increased. Tomatoes were injured somewhat.—Thomas L. Smith.

Frederick Co., Md., (N.)—About 20 percent of the wheat was in the field and 40 percent of this damaged by the late rains. Oats are still standing and little damage was done to the crop. Corn does not seem to have suffered except that it will perhaps mature later. Late potatoes promise good crop; early pototoes are only fair. Hay that was cut and in the field when the rains came is absolutely spoiled for feed. Most of the timothy was still standing. It is not rain damaged but is over ripe. Other crops escaped material damage.—P A. Hauver.

Howard Co., Md., (C).—About 25 percent of the wheat of the county is still in the fields and it seems that at least 50 percent of this was damaged—perhaps more as the rains do not seem to be over at this date, July 24. Corn suffered no damage. Potatoes are good thruout the county. Hay suffered heavily in the county. Timothy is over ripe and black. Some clover hay was made before the rains came on. Early peaches were damaged badly thru brown rot. There has been too much rain for all crops with the exception of spring sown clover which looks fine.—J. L. Fidler.

Garrett Co., (N. W.)—Practically no damage was done to crops by rain in this county, except that some hay was caught. The condition of potatoes is good—above the average.—J. A. Towler.

Harford Co., N. E.—Probably not more than one-sixth of the wheat was in the field during the wet spell, of which 20 percent was damaged. Injury to the oat crop will reach 25 percent. Beyond being blown down little damage was done to the corn. Early potatoes are giving very light yield. About 10 percent of hay crop was in field and this has deteriorated 50 percent. Standing hay was knocked flat and will injure the quality. Tomato growers feel that the crop was damaged 5 to 10 percent by the washing off of blossoms.—B. B. Derrick.

New Jersey

Cumberland County, S. W.—Sixty percent of the wheat in the field and would estimate half of this spoiled. Very little oats grown. Corn is yellowing at bottom. Early potatoes are about 75 percent of a crop. Late potatoes look very good.—W. W. Oley.

Burlington Co., (C.)—About 50 percent of the wheat and rye was in the field, 75 percent of which is damaged. Very little oats grown. No damage to corn. Early potatoes almost a failure but late potatoes look better. Hay is practically all made and the rain is good for second cutting alfalfa and clover. Rain caused some softening of peaches and tends to develop brown rot.—P. F. Keil.

Gloucester Co., S. W.—Two-thirds of the wheat was caught in the rain and there will be practically none of this which will make No. 1 mill wheat. Potatoes are about 70 percent of a normal crop. The wet weather cleaned up the early tomatoes before half the crop was harvested; a good 50 percent loss. Other crops not damaged. Second crop alfalfa coming fine.—J. A. Cooleg.

LOCAL CROP CONDITIONS IN MERCER COUNTY, N J.

This is a general farming, dairy and fruit section. Much damage has been done by the unusual heavy rains of the past two weeks. Corn planting somewhat late, owing to wet weather in May; wheat and rye harvest unusually early, bringing corn cultivation, hay and grain harvest all together. Except on wet land, corn looks good, but much is down and weedy. Hard to tend. Wheat good crop, heads somewhat short, but well filled; none thrashed yet, so cannot give yields. A great deal has been in the shock two weeks or more, such is badly sprouted and much worthless. Some stacks sprouting. A lot of timothy, left until after wheat harvest, is so old as to be seriously hurt. Many reports of potatoes rotting in ground with late blight—a disease not serious in normal years. Some tomatoes, grown for can house, are blighting. Early sown oats down badly and about ripe; later sown, standing, but nearly ready to cut, with the ground too soft to bear a binder. Fruit, irregularly set; some damage to peaches by brown rot.—R. L. S., July 23.

BIG ORCHARD DEAL

The $30,000,000 fruit syndicate, formed by Crutchfield & Woolfolk, Tyson Bros., J. G. Schlotter and the Union Fruit Company, has purchased the extensive peach and apple orchards of the Tonoloway and Sleepy Creek Orchard companies for $425,000. The syndicate has options on the Elberta Fruit Farms, Scott's Fruit Farm, the Maryland Orchards Company, the J. F. Fields Orchards, Mason and Richards Orchards, the Millstone Orchard Company, the D. L. Harrison Orchards, the Potomac Valley Orchards and other orchard properties in this section. R. S. Dillon is reported to have refused $125,000 for his orchard.

PENNSYLVANIA CROP REPORT

A reduction in corn, potato, and tobacco acreages, and a decline in condition of all grain and hay are the outstanding features of the report issued today by G. L. Morgan, Field Agent for Pennsylvania. The decrease of corn and potato acreages is due to unfavorable weather at planting time and the decline in condition of grains and grasses is due to dry weather, plant diseases, and insects.

The condition of other crops estimated in the percentage of normal are as follows:

Timothy, 90; clover, 88; alfalfa, 93; millet, 91; pastures, 94; field peas, 92; field beans, 90; tomatoes, 89; cabbage, 89; onions, 91; broom corn, 87; grapes, 81; blackberries and raspberries, 95; watermelons, 84; cantaloupes, 85; apples, 47; peaches, 45; pears, 43. The total production of apples is estimated at 9,701,270 bushels, peaches, 946,350 bushels; pears, 332,820 bushels.

The average weight of wool per fleece is estimated at 7.3 pounds, compared with 6.7 pounds in 1918; 6.5 pounds in 1917, and 6.1 the average weight for the past ten years.—G. L. Moran, Field Agent, July 12.

CHANGE IN FARM LOAN BOARD

President Wilson has accepted with "the greatest reluctance" the resignation of Herbert Quick as a member of the federal farm loan board, effective August 1. Acceptance is contained in a letter sent by the President to the retiring member of the board made public this week. Mr. Quick is to be succeeded by Representative Lever of South Carolina, who will resign his seat in the House to take the new office.

TELLS OF CATTLE PLAGUE

Dr. W. H. Hoskins, Dean of the Veterinary School of New York University, speaking at the twenty-ninth convention of the New York State Veterinary Medical Society, in Brooklyn, said that the high cost of milk, meat, and wool was largely attributable to the destruction annually of thousands of cattle and sheep which suffered from tubercular diseases. One-half of the grazing land in this state was not utilized, he said, because the farmers had been unable to replace the cattle, valued at $8,000,000, which succumbed to tubercular diseases last year.

STORIES IN FARM LAW

(Continued from Page 3)

during the life of the policy. No case in either marine, fire or life insurance so holds. To do so would be to extend the term of the policy, and all liability under it, including its beginning, for a term beyond the contract for which the premium was paid. Doubtless it was known to be inevitable, as it proved to be, that certain blocks of houses in Baltimore would be destroyed by the great fire there recently, which burnt over a considerable part of the city, and raged for several days. Yet it is entirely possible that contracts of insurance expired upon the buildings last burned after the fire had begun elsewhere in their vicinity. It would be astonishing if the liability of the insurance company was extended indefinitely beyond the term of their policies, merely because a danger had occurred during the policy which would lead to loss thereafter."

FARM MECHANICS COURSES

The accompanying illustrations show Pennsylvania State College students in study of farm machinery. With the introduction of tractors and the wide expansion of motor and engine work on farms, farm mechanics work takes rank with other leading branches of farm training. The Pennsylvania College of Agriculture offers courses in farm mechanics to both four and two-year men each semester. It gives a somewhat simplified course to the 12 weeks' winter course men. Last winter 78 percent of the winter short course men took this work. In addition, short courses of one week are given to any that apply, giving special instruction in single lines of work, such as tractor operation, etc. Last winter four such one-week courses were given. Opportunity in tractor work is open to farmer visitors during each Farmers' Week.

The course consists of detailed motor study to begin with, such as underlying principles of operation and timing of all moving parts, lubrication, ignition, carburetion, air washers, etc. Next is the study of types of tractors, radiators, fans, cooling systems, governors, bearings, wheel construction, etc. This is followed with as complete training in operation and management of these machines as time will permit. The work is practical and calculated to give the training that is needed in the operation of the newer types of farm machinery and better management of all farm implements.

The last college budget called for an appropriation for a new building for the farm mechanics department. Because of the curtailment of the appropriation the building will not be provided in the next two years. At present there is no available space for the simple housing of the machinery that is donated by manufacturers for classroom work. Space for demonstration and effective teaching is wholly inadequate. A farm mechanics building is one of the greatest needs of the College to continue the present work and provide for the enlargement that is bound to be in demand.

Pa. State College Students in Farm Mechanics

Farm Mechanics Students Studying Tractors

A PLEA FOR THE RURAL CHILD

We are always confronted by the headlines "Our Rural Schools are not what they should be." This is an unjust statement. It is not fair to superintendent and teacher who are trying in all ways possible to do their very best for those under their supervision and in return receiving very little compensation but constant adverse criticism. I say, instead of the rural schools are not what they should be, the "Rural Homes are not what they should be."

Too much is expected of the rural child. If the parents would study their children as a conscientious teacher does, they would expect less but get greater results. The foundation of the statement we are soon to see, "The rural schools of today are rapidly improving" will have to begin in the home. All work and no play is making Jack a dull boy, and instead of the parents realizing that it is their fault, the rural school is being blamed.

Having taught in the country for six years and during that time being in homes where there have been children, I have seen the inner or home life of the child, and my heart has ached for the tired, wornout boy who has no time for play and little for rest. What are parents thinking of? Work and nothing but work. Will this make bright cheerful children? Not until the parents remember their childhood days and the pleasures they craved, will they realize their duty to their children.

It is not only hard on the child, but it is cruel to wake him early, hurry him at his breakfast, have chores enough to keep him busy until school, expect him home right on the "tick" to do other chores, eat supper and then when time to go to bed, to trail off without even a good night kiss. This may seem exaggerated, but it has happened and is happening in too many of our country homes. If a few of the parents would talk to the unappreciated rural teacher they would realize that she is doing more instead of less than is expected of her.

As I sit before my eighteen charges day after day, my heart goes out to them and instead of thinking they should do better, tho I want it, I wonder that they can do so well.

Who can work day in and day out with no incentive? Children need play. They need rest. In order to grow up strong, happy men and women, they must have these and, why do not the parents see this? A farmer is careful to "go easy" with his colt. He doesn't want to strain him or hinder his growth. Much more should he "go easy" with his children. But does he think of this? No, Johnny can do this before school, that after school and we will plan the work so the big jobs will come on Saturday when the boys are home. This is the plan laid out by too many of our farmers. It isn't right, and it never will be right. Instead of planning work for the boys on Saturday, why not plan some sort of amusement? A little social time Friday evening, a trip to town on Saturday and certainly church and Sunday School should be something for the hard-working school boy to look forward.

Only this morning one of my boys came in late. He had to help with the chores. Another was here only four instead of six hours. He had to stay at home and help with the washing. And still another had to go to town to have his hair cut. These are not excuses, and should be avoided. The parents will expect these boys to pass their examinations with good high marks and if not, "The rural schools are not what they should be."

It is right for a boy to help. I am not disputing that. He can and should be a big help in the home. But what I am trying to impress upon the minds of the parents is their unfairness to the child. We must not expect more of a child than we ourselves can do. We often hear an adult say, "When I have time to sit down to read, I am too tired for anything deep." The child's study at school is "deep reading" for him. Is he prepared for it? Is he in the right condition to do justice to it? Not, unless he has his hours of rest and recreation. Children up to twelve years of age should enjoy ten hours of sleep daily. Are your children getting it? Never but once have I boarded in a home where the children did.

One fault is too much looking ahead. "Yesterday is gone; tomorrow may never come. Today is yours, use it."

Our homes lack love and sympathy. Children need both of these and respond so readily. Let us try to make there lives as happy and cheerful as possible. They have their burdens which seem to them like mountains. Let us then feel that they can come to us for words of comfort. It is such a wonderful feeling to have a child heavy at heart come to you and pour forth his woes when you can send him off happy. Each time I have the experience it makes me feel happier, nobler. Just try it. In the first place, unless he knows you love and sympathize, he won't come. And after all, what greater thing is there than the love of a little child? Parents, think! Rebecca L. Elliott, Rural Teacher, Chenango Co., N. Y.

TRACTOR RECORDS PREDICTED

Two Big Demonstrations in Pennsylvania This Summer

A lot of farmers visit tractor demonstrations and get nothing out of them. They stand around on the head-lands and look wise—and are just as wise when they get home as when they started out in the morning. In this state only two demonstrations of any size will be held this summer, one at Harrisburg, Pa., August 12-13; the other at Butler, Pa., August 21-22. The way to get something out of these demonstrations is, first, to attend them; and, second, to observe the following suggestions in studying the tractors on exhibition:

1. Observe with great care the relative ease with which tractors pull their loads. What is the rating? How many plows are being pulled? Does the motor seem to labor under its load or does it give evidence of reserve power?

2. Is there noticeable slipping of the drive wheels? If so, there is lack of traction, which might be due to lack of weight or to poor design of lugs, granting that the footing is reasonably good.

3. Observe the ease with which the operator handles his machine. Are two wheels in the furrow or are all wheels on the land? If the latter, does side-draft seem to continually pull the front wheels toward the furrow?

4. Is the operator placed in a comfortable position? Is he protected in any way from dust and dirt?

5. Do you see gears exposed where they will collect dust and mud or are they enclosed?

6. Does the tractor seem to pack the soil either when plowing or when working on plowed land? Do the traction lugs seem to be effective in preventing packing of the soil as well as in giving traction?

7. Does the machine have a neat, finished appearance giving evidence of good materials and good workmanship? Can it be adapted to different kinds of work?

8. Observe the number and size of fitting tools which the tractor seems to pull easily.

9. Observe the work done by the different plows and note the attachments with which ease is equipped. Also, study the harrows and other tools shown.

Attend one or both of these big demonstrations this year. The trip will be worth money when you are ready to buy your tractor.

Speaking of leaks—it is estimated that of the 10,000,000 pounds of nitrogen and 10,000,000 pounds of potash produced yearly in the manure of New Jersey live stock and poultry, half is lost by leaching and fermentation alone.

From the silo to the hen, nothing on the farm should be allowed to loaf. Keep the one filled and if the other doesnt pay her board bill, serve her up with gravy and stuffing.

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Our Job is to serve our readers. Whenever and wherever we can help you, write us.—The Editors.

Daylight Saving

THE fight for repeal of the so-called daylight saving law must be repeated. Congress has abandoned the hope of passing the measure over the President's veto at the present time, and the agricultural bill originally carrying the repeal has been passed without reference to daylight saving. But a specific repeal measure will be introduced soon. It will have the support of a majority in both Houses of Congress. Farmers and labor organizations and all others opposed to the present time arrangement must convince the President of the justice of their objections and the economic wisdom of the repeal. It is certain that he will veto any repeal measure that may come to him unless he can be shown that the earlier day is an actual hindrance to a large class of citizens and an injury to farm production. In stating reasons for his veto of the original measure the President gave no indication of knowing that there are any farmers in this country. If the farmers will show as much activity in pressing their side of the question with the President as they did with members of Congress, he will not only learn that farmers make up a considerable proportion of our population, that farm production is of some slight consequence but also that farmers are fully awake to their interests.

Rain Damage

THE almost incessant rainfall over the Atlantic Coast territory during the period of July 15 to 23 did an immense amount of damage to farm crops. Wheat suffered most. Where wheat was in shock, awaiting threshing or hauling to the barns, the long rainy spell caused sprouting which will totally destroy the value of the grain. It is impossible to estimate yet the amount of damage done. Reports from many of the Maryland counties will be found on page 4 of this issue. These reports will be followed by others from Pennsylvania, New York and New Jersey counties next week. So far as available, it appears that wheat damage will run from 15 to 50 percent, according to the percentage of the crop that was caught in the fields. This will mean millions of bushels totally lost, and much more damaged sufficiently to impair its selling price. For many farmers of this section the rains were a calamity which will mean a loss on the season's operations. The total rainfall recorded at the Philadelphia weather station for first 22 days of the month was 10.17, practically of which fell in eight days. Lack of wind and sunshine made the heavy fall more damaging.

A Chicago report indicates wheat damage over the country that will materially reduce the predicted "bumper" crop. Blighted kernels, smut, rust, fly and rain damage are reported to threaten a reduction cutting total yield to below 1,000,000,000 bushels and high grade wheat to less than 500,000,000 bushels.

Feeding Damaged Wheat

MANY farmers in this section will be confronted with the problem of disposing of wheat damaged by sprouting and exposure. When markets are normal is a questionable policy to attempt to sell damaged wheat. Under present conditions, and with other grains high, it will certainly pay many to feed such wheat if they have any fattening animals on the farm. Badly sprouted wheat is a total loss, but there will be much that has feeding value that cannot be put into condition for marketing. This wheat may be fed to hogs at a considerable saving over the present cost of corn. The Missouri Station has but recently concluded feeding tests indicating that slightly damaged wheat is a close second to corn as a hog feed. In pounds of grain required to produce 100 pounds of pork, damaged wheat was ahead of corn. It required 483 pounds of damaged wheat to produce 100 pounds of gain in the hogs, as compared with 582 pounds of corn in the same test. Where hogs are available it would seem advisable for farmers to use the damaged wheat to replace the corn in the fattening ration. For younger hogs, the addition of tankage to the damaged wheat ration will insure good growth and a considerable saving over the cost of other feeds at present prices. Where hogs are not kept, considerable quantities can be disposed of to advantage in feeding poultry or even dairy cows.

Pernicious Activity?

A REPORT of the National Hay Association, an association of dealers, which recently held a meeting in Detroit, states that a resolution was passed, "requesting the Department of Agriculture to prevent the activity of county agents in interfering with the legitimate business of the different counties in which they are working." One of the speakers described the county agents as destroyers of economical and efficient distribution.

This criticism is probably drawn out because some of the county agents have busied themselves along lines most vital to agricultural prosperity, that of cooperation in buying and selling. In some places the agents, besides pushing their "legitimate" lines of work, have lent valuable assistance in organization work such as helping to organize milkmen, associations for buying supplies and selling products, cooperative purchase and use of machinery, etc. If such work as this is not legitimate work, then we question the utility of the whole movement. Every unprejudiced observer and every authority on agriculture declares that the commercial end of the business is behind the production end in its development. To bring it up, organization is necessary and to effect organization there must be capable leaders. Shall county agents be prohibited from acting as such? Farmers in some states claim they are already restrained from activities which are not strictly along lines of production, and agree with middlemen that since the agents are supported by public money they must necessarily keep out of purely class activities. Theoretically, and in some places practically, the farm bureau is composed of farmers organized for the purpose of promoting the best interests of agriculture in the county, and the agent is employed, or furnished, as a trained helper. The whole movement will stand or fall according to the answer to the question, "Is the county agent to be the agent of the bureau, or are his activities to be prescribed and limited by outside authority?"

Farm Loan System Menaced

CONGRESSMAN L. T. McFadden, of Bradford County, Pa., has introduced a bill in Congress to subject all Federal Land Bank bonds to taxation. The Land Bank system is not and has never been popular with the banking interests of the country. Congressman McFadden, a banker, has always opposed the system. Representing a purely agricultural district in the northern part of the state, it must be assumed that he has good reasons other than personal or professional, for his opposition to legislation designed to serve his rural constituency. But his bill would greatly curtail if not totally destroy the Land Bank system. Taxing the bonds would make it most difficult if not impossible to market them and thus destroy the very foundation of the structure. The McFadden bill aims at no impovement of the present law. It will correct no weakness in the fundamental principles of the law. It cannot be justified on the basis of correcting special privilege unless it will go further and tax all forms of bonds now exempt. It would do nothing but impair the effectiveness of the only system we have for extending credit facilities to farmers comparable with those enjoyed by other classes of business.

The Land Bank system is not perfect in itself. It was inaugurated under heavy opposition by the banking interests. The disturbed financial conditions of the war period, with the floating of immense bond issues by the government, added hindrances that curtailed its early expansion. In spite of this, up until June 1 of this year, the total amount of mortgages closed amounted to $223,311,766, numbering 87,816 farmers. Total applications to that date numbered 196,865, with requests for loans aggregating $529,497,980. We do not have available the complete number of land bank organizations in this state, but organization work has been more active in the last year than since the system was established. Tioga, Centre, Berks, Bucks, Lehigh, Cumberland, Columbia, Montour and Armstrong counties have recently organized. Other counties have their banks in active operation. There is sufficient evidence that the system meets a local need and is being used by the farmers of the state. These farmers will want good and sufficient reasons for any undermining legislation at this time.

The Small Farmer

THIS is a day of big things. Men talk of and deal in numbers such as were found only in test problems for the advanced class in arithmetic a generation ago. Hundreds have become thousands, and billions are used in place of the old-time, astounding millions. We use large numbers when we speak of crops, loans, taxes; ships built and ships sunk; men mobilized, transported, killed; children orphaned, or starving; combinations of capital and ability such as the world never knew before—in fact Gulliver was simply a prophet of modern times when he wrote of his travels among the Giants.

In the midst of all this the thoughtful person cannot help but be impressed with the thought, "What is to become of the small farmer?" Will he be forced to give up his small, independent business for cooperative farming, or to become a tenant farmer for large land-owners? The tendency in the past has been the other way. The census reports show that the acreage of the average farm has been steadily growing less. This is because the old-time plantations and large holdings have been divided and subdivided into smaller farms. While the rural population has not kept pace with the growth in city population, yet there has been a steady increase, and the gradually increasing number of better, tho smaller, farms has been one of the most hopeful indications of the nation's stability. This tendency might well continue yet a long time instead, as some suggest, of reversing the policy and transforming food production into a "Big Business," operated, with an eye to efficiency, upon big business principles.

There is little doubt but that the acres now tilled might be made to yield more if operated as groups of farms, owned by syndicates and managed by capable men. But such a plan would involve the sacrifice of the independent, inspirational spirit of the present home-loving farm folks—something that no nation has ever lost and continued to live. We have a striking example of the fate that overtakes a nation that sacrifices everything for the sake of efficiency and material gain.

The day of the small farmer is not passed, nor is there likely to be progress in that direction. Promoters may promote and theorists may theorize, but as long as so large a part of our people love the smell of the soil and covet a spot they may call home and from which they may wrest an independent living, the great bulk of American agricultural products will be raised by small farmers.

HARRISBURG LETTER

Weather Damage Severe.—While it will take months to make anything like real estimates of damage done to wheat and oats by the protracted rainy spell. State officials are of the opinion that in the big wheat raising counties the loss due to sprouting will be of a serious character. Reports are being made from almost every section of the state and these have been supplemented by personal observation by Secretary of Agriculture Rasmussen and others who have gone thru various counties and noted appearances, as well as getting first hand information. In such sections as farmers were able to get their wheat threshed in the field there will be little loss, but the great majority of farmers have been unable to secure such attention and the wheat in the shock has sprouted badly. From what the Secretary says the experience at State College farms should prove a good lesson because the loss there will be only about one percent. This is due to the proper capping of the shocks. From all accounts there is much to be learned in regard to this work. There will be some loss in yields, too, due to the color. The oats crop has been badly hit all along the line. The corn situation is not unfavorable altho thunder storms and heavy washes from the rains have damaged many fields.

Can Shoot Blackbirds.—Commencing next Friday, August 1, it will be lawful to shoot blackbirds in Pennsylvania under the provisions of the new law. Farmers and residents of farms can shoot the birds on their places without a license, but everyone else will have to secure the arm tag. This law was passed to enable clearing out of the flocks of birds which are a nuisance in fields in August. Heretofore the season has started in September, when the birds had done most of the damage.

Stale Egg Ruling.—After several days of consideration State chemists have reached a decision in regard to when an egg is fresh and the new bureau of foods will put into operation as soon as possible a ruling for the guidance of people in the trade. The ruling has not been made in regard to days, but on a basis of condition which can only be established by test.

The Road Situation.—According to State Highway Department officials, in the neighborhood of 650 miles of state highway will be under contract before long and more roads will be advertised for construction, it being the intention to push the work, altho weather conditions have materially handicapped not only construction but oiling and resurfacing. The State Grange executive and legislative committee in a statement issued a few days ago questioned the cost of the "overhead" in the road construction and drew a sharp reply from Governor Sproul. The State Grange thru its officers has replied that "overhead" is somewhat elastic in use and that the best time to judge is when work is finished. The promptness with which the governor replied to the Grange officials indicates that anything said relative to highway construction had better be well founded because there is nothing in which he is more interested.

Huge Appropriations.—The total State appropriations approved by the governor are over $103,000,000 and the legislature of 1919 goes on record as the first "hundred million dollar session." The auditor general says that he can get the money. Indeed, he will not have far to go as the revenues for the two last fiscal years aggregated close to $92,000,000. As to manner in which the appropriations were made and approved, things are not materially different from what they used to be. While the governor followed the recommendations of the State Board of Public Charities pretty closely in regard to hospitals, he did very little to establish a system of definite payment for free service rendered by such institutions and some of the allowances for departments were more or less criticized when announced. However, in Harrisburg things have been started for an overhauling of the State government and introduction of some modern business methods as will appear when the reorganizations are announced in some departments.

Centralization.—As noted before in this letter and lately made much of by some who were not awake last winter, the whole tendency of the legislation enacted this year has been toward centralization. Numerous bills passed give the governor right to pass upon appointments and control over state business is more and more centered in the office of the executive, altho the handling of detail has been taken away from it. The auditor general gets control of the mercantile appraisers' work and all the appointments under it in the counties and all the advertising, while thru the inheritance taxes the power of this office is made as great as it was 100 years ago when a systematic effort to curtail it was begun. The secretary of internal affairs gets more power; the superintendent of public instruction becomes a man of vast authority, the commissioner of labor and industry thru various policies being worked out will have wider range and the secretary of agriculture will be able to initiate things which will enhance prestige and extend authority. And it all goes back to the governor's office. Under a man like Sproul with business reputation and legislative experience such a condition will probably work out to advantage, in opinion of many here, but there will be other governors to come.

The Rural School.—There are a lot of people in various counties of Pennsylvania who would like to know whether the salary follows the teacher or the job. This problem and the question of what is a rural school are two rather large issues and it is up to the State school authorities to work them out. Elections of teachers are being held up, business arrangements remain in the air and various matters affecting the opening of the schools are to be settled. The state will not pay out any money for a time, but a good many school boards, especially in rural districts, like to get their financial arrangements made before September.

More Township Aid.—State authorities have announced that the plan for extending aid to townships in the form of "rewards," as provided in the Jones bill just approved, is to be put into effect as soon as possible and that half of the million dollars appropriated will be available when the required reports are filed with the State Highway Department township bureau.

Gain in Wool.—Estimates made at the Capitol are that the wool clip in Pennsylvania will commence to show an upward trend for the first time in years. It will go over 6.1 pounds per sheep, and this is largely due to the response of the smaller farmers to the appeal to raise sheep. The wool is finding a ready sale.

Dog Licenses.—The issuance of dog licenses has jumped amazingly in several rural counties as the result of some active work by State officials in enforcing the license law. For a time it looked as tho there would be a series of court tests, but this is unlikely.

As To Institutes.—Preliminary reports indicate that there will be fewer farmers' institutes than usual this fall. The appropriation is much the same as usual, but owing to need of economy and of bracing up interest in some districts the meetings will be cut down, being transferred to new and more centrally located places. One of the plans to be worked out will be establishment of a shipping center where the institutes are held so as to develop the farm outlets. The set "speech" will be done away with if it is possible and a general discussion of questions and requests for information substituted. Production and marketing will rank side by side and the plans of the department in marketing and other bureaus will be made known in plain English.

Can Change Period.—There have been a number of amendments to the school code affecting the smaller districts approved by the governor, among them being one authorizing directors to reduce the period of compulsory attendance in rural districts so that boys and girls may help on the farm. Rulings and information on these amendments will be sent out from the state educational offices.

Trouble Over Markets.—In some of the cities there is more or less trouble occurring over prices, and efforts to pass restrictive legislation, are being made. In some towns the drive is being turned against the hucksters and wholesalers who buy from farmers by the wagon load. In others, farmers who sell their whole stock to commission men as soon as they reach retail markets are being made targets. In almost every instance official authority is after the high cost of living trip without taking the personal equation into account.—Hamilton, Harrisburg, July 28.

NEW YORK LETTER

Champion Debt Payer.—The New York State farmer is designated as the champion debt payer by officials of the New York State Patriotic Farmers' Fund. During the war over a million dollars was loaned to 10,000 farmers the average loan being about $112. Now that the affairs of the fund are wound up it is found that not a dollar was lost thru dishonesty or crookedness and there was no security, but character. No mortgages were taken. The fund was the conception of William Church Osborne and will be continued by bankers and business men, such is their faith in the farmers' financial soundness.

Cheese Price Raises.—The Watertown and Gouverneur dairy boards disposed of 7,525 and 4,061 boxes of cheese, respectively this week at 31 cents, a raise of ⅜ of a cent. The demand is now good.

Milk Business Directorate Enlarged.—The board of nine directors of the Onondaga County milk producers association have voted to increase the number of directors to fifteen, as they find their field of activity rapidly widening. They also voted to sanction a maximum indebtedness of $500,000, instead of $120,000, that was guaranteed by the 400 members contributing $300 each as an initial working fund. With the hiring of a new manager to supervise the building of the new plant the work is progressing rapidly.

State Loss From Carelessness.—The health department reports 2,300 lives lost in the state last year from typhoid and diphtheria. The department calls attention to the fact that municipalities and private companies may be held responsible for lives lost by illness due to carelessness, ignorance or inaction in face of threatened outbreaks of preventable diseases.

Auto Brake Inspection.—Police and state officials favor legislation requiring an annual inspection of the brakes on automobiles. A chart has been worked out, showing that if the brakes are efficient a car going twenty miles an hour should be able to stop within a space of 37 feet, and that a car going ten miles an hour should stop within 9 and two-tenth feet. This is a national movement favored by "safety-first" societies and police officials.

Wool Notes.—The Tioga County wool that was pooled by the growers amounted to but 16,000 pounds instead of the 23,000 pounds expected, due to the fact that, at the last moment, local dealers, in an effort to break up co-operative selling, offered better prices than had been bid for the wool. The biggest consignment of wool made by any one farmer in this pool was sheared by a 19-year-old girl of Newark Valley. The price received by Tompkins County wool growers this year was ten cents above last year's price.

Long Contested Suit Won.—A cabbage dealer of Homer has won a suit for damages on a car of frozen cabbage that the Lackawanna railroad has contested for years. The highest cost of the state has finally awarded a verdict of $461.50 damages and costs.

Interest in Hops Reviving.—Tho it is not likely that this state will ever resume it leadership in the production of hops, yet interest is returning, due to the high prices of the past two years. A few new yards were set last spring in eastern counties, about 50 acres in Otsego County and similar amounts in a few other counties. This year's crop is free from insects and promises an early abundant yield of the former premier quality produced in this state.

Farmers' Activities. — Lockport dairymen have been busy all summer developing a huge milk plant. Four milk dealers have been bought out, controlling 30 percent of the milk used in that city. The farmers' co-operative association will have control of the other 70 percent of the market milk as soon as a price can be arrived at probably beginning this month. Another co-operative association in Sullivan County involving a $200,000 plant is being considered. In the Keaka Lake grape district the acreage of grapes is being increased and a number of plants in Western New York will manufacture grape jellies, jams and grape juice. Growers of black raspberries are contracting the dried fruit at 90 and 95 cents a pound and the crop was a large one.—F.

NEW JERSEY LETTER

Second Crop Potatoes.—Seed potatoes placed in cold storage by the Mercer County Board of Agriculture last April are now being taken out and distributed among the farmers who placed orders months ago. The Mercer County late crop of seed potatoes have shown up better than seed from any other source. The general practice among growers is to have potatoes out of cold storage at least a week before they are planted. Some prefer to allow the potatoes to show small sprouts before cutting. The New Jersey State Potato Growers' Association in cooperation with the State Department of Agriculture has arranged to certify late crop seed potatoes for any grower in the state who desires the service. This means that a grower, whose potatoes pass all inspections will be granted a certificate showing his potatoes are of good quality, free from disease and superior to ordinary seed.

State Poultrymen Make Tour of Connecticut.—Nothing in the educational line is going to escape the New Jersey poultrymen, and having studied poultry raising methods at home quite thoroly, they entered New England and make a study of what Connecticut had to offer in the poultry raising line. The plans provided for an automobile tour this week. Members of the New Jersey State Poultry Association motored from New Brunswick, N. J., to Storr's, Conn., visiting on the way the leading poultry farms and taking in the annual summer field meeting of the Connecticut Poultry Association at the Connecticut State Agricultural College. Twenty-five automobiles were used in carrying the members of the association, and other persons not members interested in poultry raising. Prof. Harry R. Lewis, head of the Department of Poultry Husbandry at the New Jersey State Agricultural College at New Brunswick and chairman of the educational committee of the State Poultry Association, was in charge of the plans for the trip.

Crops.—Corn has shown a good gain in New Jersey during the past week and is generally rated as excellent. Some is in tassel and early sweet corn is being marketed. Hundreds of bushels of potatoes are being dug, while wheat and rye cutting is nearly completed. There is a fine crop of oats in all parts of the state with the exception of the Southern sections. Early peaches and apples are being picked. Peppers and tomatoes are fair and sweet potatoes very good.

Limited Supply of Fruits.—The ten days' rain, which caused much loss among fruit and vegetables growers in all sections of Jersey, caused an advance in the price of fruits in particular in the municipal markets thruout the state. There is also a limited quantity of pears, peaches and other fruits. These conditions caused many housewives to defer canning fruits until later in the season. Vegetables were also lacking in quantity and quality, owing to the rainfalls. Pears headed the list of fruit offerings for the week.

Damage From Heavy Rains.—Reports coming in slowly from the farming districts show that thousands of dollars of damage was done to crops in the agricultural districts, and that in some cases the farmers will sustain total loss of wheat and other grains which had been cut and were stacked in the fields.—K.

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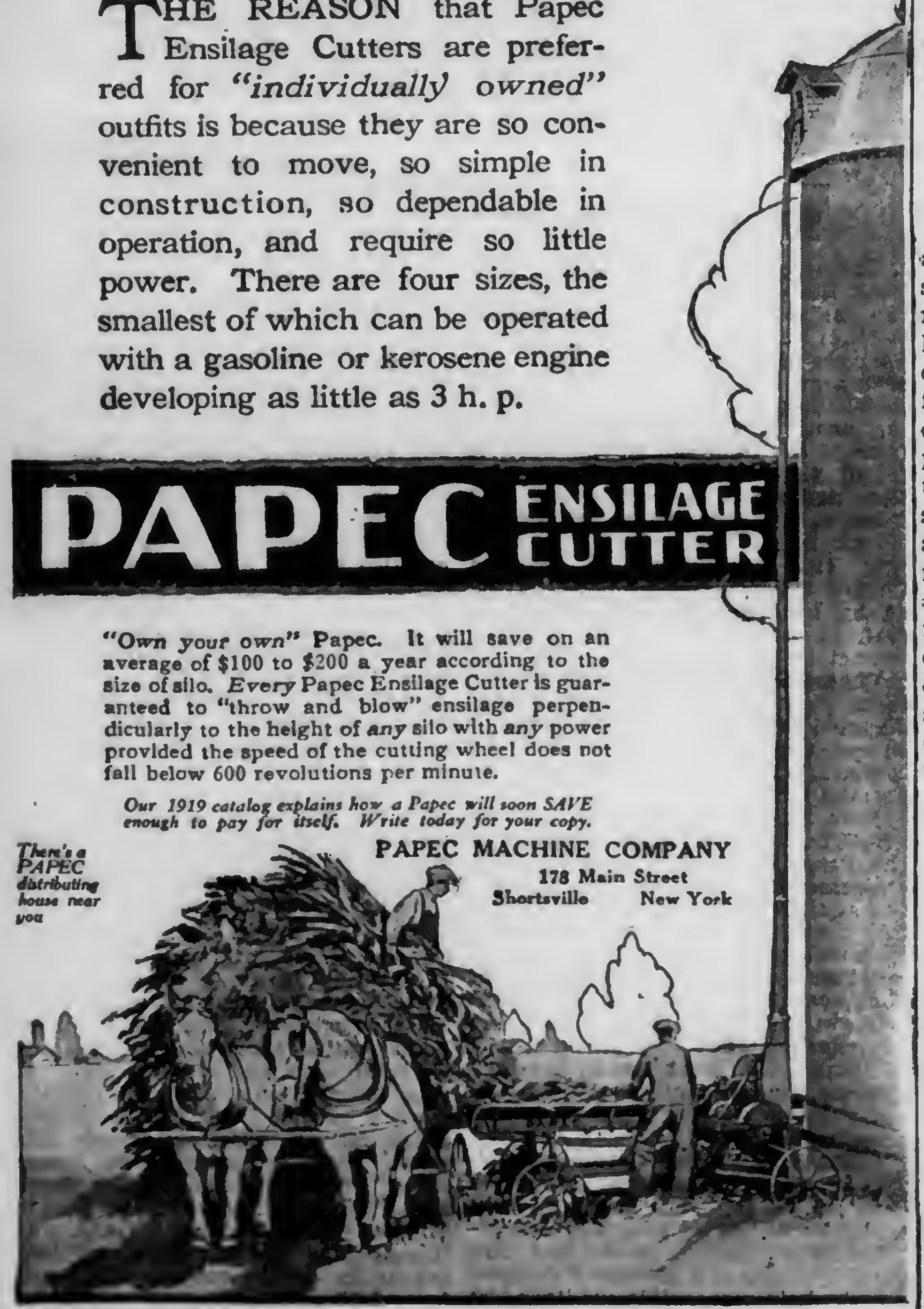

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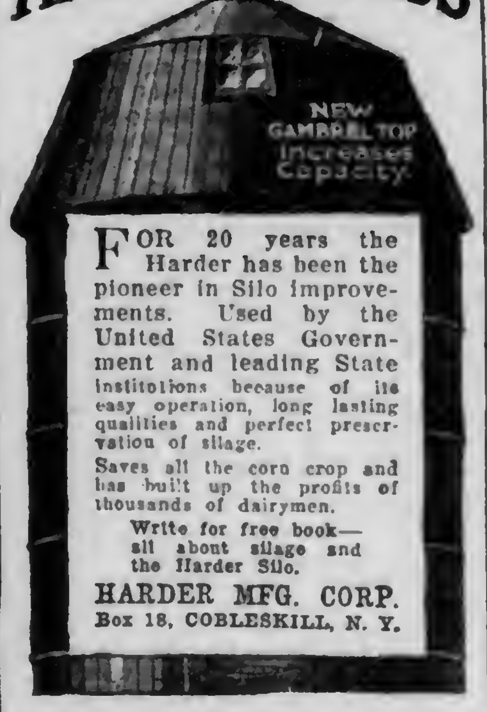
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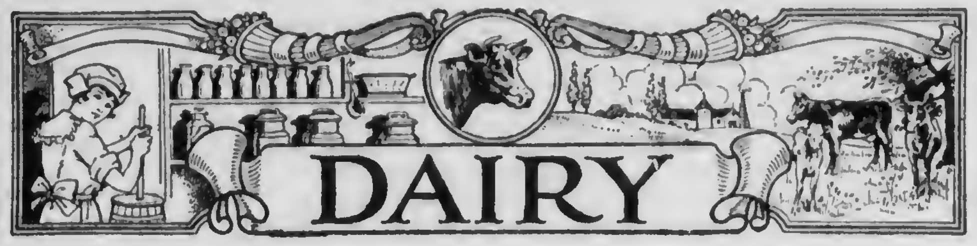

Among New York Dairymen

Cows in our up-state dairy district are working well at production. The season has been favorable for the most part, altho we have had rather less rain than for three or four years during the summer. Dairymen are feeding more grain than usual, even on the present high market. Feed prices are steadily advancing and there is little likelihood of any considerable decline on most feeds. We are looking mostly for advances rather than declines. There may be a few feeds that will show some falling off later, but dealers have a way of keeping the prices well up when once they are advanced. Corn now seems too high to buy except as an extremity and corn goods have gone up steadily. Fortunate was the man who bought gluten at $60 or $65, apparently. Yet the cows are getting the feed and we are getting the milk more than ever before. August milk may not be so high as to make it profitable but thus far this season dairymen have done pretty well. We look for some relative decline from now on.

Future Greats in the Guernsey World

Should we find that fall and winter milk bring less proportionately than June and the adjacent months, the present tendency to turn to summer dairying will be accentuated. Some equalization will need to be made, for winter milk is none too flush so far as we can determine. If 3 percent milk brings only $3.20, there will be disappointment, and the prospect is not bright for more.

Shorter Hay Crops

Farmers are frequently heard saying that in spite of the favorable season they are cutting less hay than last year. A few report more, but that does not seem to be usual. It is true that the country may have a better hay crop than last year, yet it looks here as tho hay prices may be as well up as last year. Dealers paid $20 in the mow for considerable hay of average quality. It may not bring that early and possibly not at all, but a good price looks to be coming. Why do we not get as much hay as for some years? Only because we have done less really good farming. And the poorer farming is due to the scarcity of labor. If present conditions continue we may look for somewhat less production as the years go by. It looks reasonable to expect it. A poor crop year now at any time would show very startling results. We have had good crops so long that people think it will always last. Labor is demanding shorter hours and more pay, and in many cases they are entitled to more pay, and workers are drifting to town rapidly. Combine a shortage of labor on farms and a dry season and there might be danger of a decided food shortage.

Farms For Sale—Labor

Meanwhile farm owners are offering their farms for sale because they cannot work them. I have noted before the low prices of these dairy farms. Never was there so good a prospect for the fellow who can do a lot of work himself, and who likes that sort of a thing, as right now. Something unforeseen may happen, of course, and I would be the last to advise plunging in farming. Go safely, but the chance for five years is certainly good. Haying wages have been and are 40 to 50 cents an hour. Farmers are willing to pay 40 or 45 cents for good work when weather is right. One man who had two men at that figure said he was glad he hired for he is thru haying in really good season. We like to get thru by the tenth of July or earlier up here.

This farmer, however, said that he had to do three days' work a day to get the men to earn anything for him. If a man is sturdy enough, he may do that for a time, but he doesn't like it for a steady grind. It is the way it must be done to really get what is coming, except in case of a better disposed hired man than the average these days. Not very encouraging, you may say, but not so bad for the rugged man, especially if his family can help him. If he is reasonably independent of outside help he will make it so pretty well. A village man proposed to buy a certain farm but said he would want it only if he could keep a man there and go back and forth from town to help do the work. I very promptly advised him to let it alone. Many a farmer would never think of offering his farm for sale if he could get reliable help at any reasonable price, or possibly at almost any price.

League Cooperation

The League Co-operative Association is still the center of consideration. It has been thought by some that the subject would die out. There is not much noise made except in an occasional locality, but when you get in touch with a bunch of farmers and get close to them you find that you have as determined a lot of people as when the League first stood up for rights in 1916. It will take some discussion to make every man see just how the thing is going to work, and that is the most encouraging feature. Even the leaders are anxious to go slow enough not to make serious mistakes, and they are already saying that it is likely that many changes will have to be made in the plans. Fortunately there is little shouting about it and the difficulties are being studied. If it were not so I believe many farmers would be fearful of results It hardly seem to me now that it is in danger of breaking over money, for there is money to be had and it will be paid in when needed if farmers are satisfied that the plan is sound.

The chief difficulty as I see it now is to arrange some way to take care of every League member. It would be suicidal to go into the scheme without this carefully worked out. There will be localities that will not care to raise money at first and secure a creamery. If they do not, how can they be taken care of by the League? There will have to be some way for this and it is, no doubt, being considered. Let us hear from someone on this point as soon as ready. It will be possible to get the views of leaders on this soon. I think.

It looks as tho we cannot commence without all getting in on the co-operative. Yet it may be done by the co-operative manufacturing and selling other League milk to the dealers. I hardly like this, but we will likely see some better way when it is discussed further. Picnics are here and fall meetings are coming soon, and we will get better posted. We are doing a lot of thinking and quiet talking now among ourselves. —H. H. Lyon, Chenango Co., N. Y.

BALTIMORE MILK PRICES

August 1 will mark a new era in buying milk in the Baltimore territory. The Maryland State Dairymen's Association, and the Milk Bottlers' Exchange, of Baltimore City, have agreed that all milk coming to Baltimore shall be bought on a butter fat basis. They have arranged to have the Philadelphia Labatories establish a labatory in Baltimore, and do all the testing, collecting samples, etc. A copy of each shipper's test will be mailed to him, as well as a copy each for the dealer, that he ships to, and to the Maryland State Dairymen's Association.

For a long time the producers have wanted to adopt this plan, and while the dealers have stated that this was the only fair way to buy milk, there were always obstacles in the way of putting it in force. A committee from each of the two Associations was appointed to work out a plan to bring this about, and after several meetings adopted this plan, with a differential of five cents per gallon, for each unit above 3 percent, or one-half cent per gallon for each tenth of percent.

The price for August will be 34 cents per gallon for 4 percent milk. With this differential, it would make 3 percent milk 29 cents and 5 percent milk 39 cents per gallon; 3.6 percent, 32 cents and 4.6 percent, 37 cents per gallon. This is a larger differential than is used either in Philadelphia or New York, but as the average milk that comes to Baltimore is said to be above 4 percent it was pointed out that a smaller differential would be paying a premium on the low testing milk. The gallon basis was used as all milk coming to Baltimore is bought by the gallon.

An effort will be made to have all the dealers use this method which can easily be done, the small dealers having the same advantage as the larger ones. Check tests will be made whenever there is a dispute.—D. G. Harry.

$3.13 FOR AUGUST LEAGUE MILK

Dairymen's League milk for August has been sold for $3.13, or about 6⅔ cents per quart. This price is for 3 percent milk at the 200 mile zone with the usual differentials for freight and butterfat. The August price is 12 cents a hundred more than was paid producers for July milk. It was determined by the price agreement now in force between producers and dealers which takes both market conditions and cost of production into consideration.

The average market price of butter for the 30 days ending with July 20th was $.5198 The average market price of cheese for the same period was $.3131. To the average of these prices together with the average price of skim milk and whey is added 36 cents to allow for costs of production. The result is the August price.

The prices in the Buffalo District for August are $3 per hundred for 3 percent milk with the usual differential for butterfat, or 29½ cents a gallon, or $3.24 flat.

The flat price in the Rochester District for August is $3.41.

WHY DAIRYMEN SHOULD ATTEND NATIONAL DAIRY SHOW

Men engaged in various lines of business have their associations which are made up of all men in a specialized business. They hold their annual meetings and talk over the present and future of their lines of business. It should be the aim of every dairyman to attend the National Dairy Show and gather the latest facts concerning his business, mingle with other men in the same line and keep up to date with all methods and improvements which are changing so rapidly.

The National Dairy Show will be held this year at Chicago, October 6 to 12. One of the great lessons that is to be gathered from a visit to the show is that dairying is not an insignificant side line in this country and that there is more to it than a means of occupying the time and energies of women and children.

The breeder of dairy cattle will see the latest patterns of cattle of their chosen breeds and have opportunity to make his own comparisons. The latest equipment for farms, barns and creameries will be on display. Labor saving devices and new methods and means of handling all lines of business in connection with the dairy industry will be in evidence. A week's vacation from the farm and factory spent at the dairy show in Chicago this fall, Oct. 6 to 12, will be the means of greater development and interest in each man's business.

Simplicity of the DE LAVAL

During hot summer days, simplicity in cream separator construction avoids waste and makes possible quick and easy handling of milk.

The DE LAVAL Cream Separator is remarkably simple. Thousands of DE LAVALS are run and cleaned by children every day.

This simplicity means long life and freedom from repairs, and is the outcome of over forty years of unquestioned leadership in cream separator inventing, developing and perfecting.

Every part has been developed to its highest degree of simplicity coupled with efficiency and the DE LAVAL has earned for itself the name of being "the world's standard separator."

More DE LAVALS are in use than of all other makes combined.

See the local De Laval agent, or, if you don't know him, write to the nearest De Laval office as below

THE DE LAVAL SEPARATOR CO.

165 Broadway
NEW YORK

29 East Madison Street
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61 Beale Street
SAN FRANCISCO

GLOBE SILO CO SIDNEY, N.Y.

SILOS

Extension Roof that is really practical. Adjustable door frame with ladder combined. Catalogue gives full information. Agents wanted who can sell and can devote some time. Write

GLOBE SILO CO.
5-15 Willow St., Sidney, N.Y.

Before You Buy Your Silo, Investigate the reliable Green Mountain. Send for circulars describing long-life, tight construction, new Anchorage System, etc. Creamery Package Mfg. Co., 345 West St., Rutland, Vt.

GREEN MOUNTAIN • SILOS •

Molasses Richest Feed. Low Ton Cost Write today for lowest price
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DEMPWOLF'S FERTILIZERS

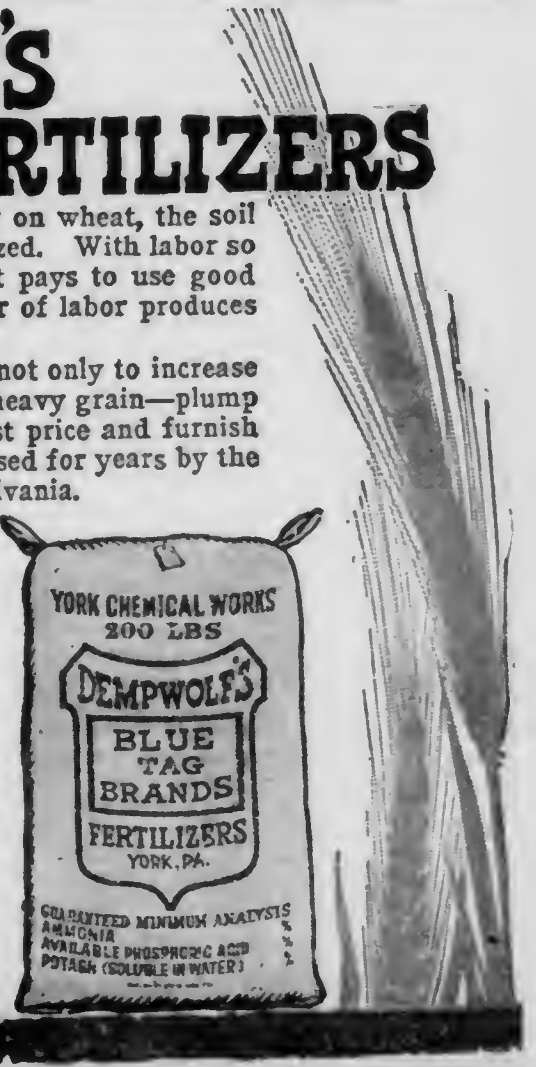
TO make the most money on wheat, the soil should be heavily fertilized. With labor so scarce and expensive, it pays to use good plant foods, so that every hour of labor produces two bushels instead of one.

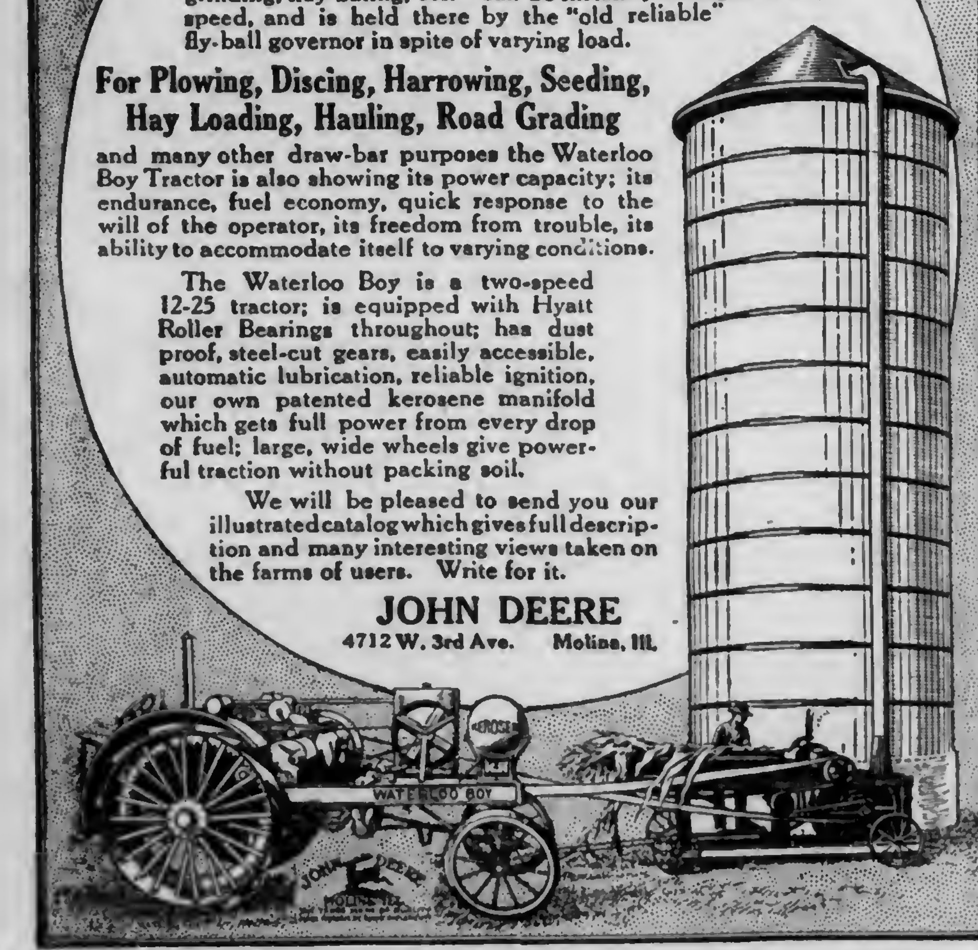
Use Dempwolf's Fertilizers not only to increase the yields, but to insure good, heavy grain—plump kernels—that bring the highest price and furnish good seed. They have been used for years by the best wheat growers of Pennsylvania.

In order to outwit the Hessian fly, wheat should be planted late. The Nitrogen in Dempwolf's Fertilizers enables you to plant late, for it gives the plant a quick start even in cold ground, and enables the crop to resist the ravages of the fly.

Write for full information about Dempwolf's Fertilizers in analyses to suit different soils and crops. We have facilities for prompt shipments, with no congested railway yards nearby. We urge, however, that your order be placed early.

YORK CHEMICAL WKS.
York, Pa. 2


YORK CHEMICAL WORKS
200 LBS
DEMPWOLF'S
BLUE TAG BRANDS
FERTILIZERS
YORK, PA.
GUARANTEED MINIMUM ANALYSIS
AMMONIA %
AVAILABLE PHOSPHORIC ACID %
POTASH (SOLUBLE IN WATER) %



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ORIGINAL KEROSENE TRACTOR

Ample, Steady, Self-Regulating Belt Power

is one of the features of the Waterloo Boy which owners have found of great value. Its 14 x 8 inch pulley is driven direct from motor. Belt speed of 2,700 feet per minute is a good average for threshing, silo filling, corn shelling, feed grinding, hay baling, etc. Can be instantly changed to any speed, and is held there by the "old reliable" fly-ball governor in spite of varying load.

For Plowing, Discing, Harrowing, Seeding, Hay Loading, Hauling, Road Grading

and many other draw-bar purposes the Waterloo Boy Tractor is also showing its power capacity; its endurance, fuel economy, quick response to the will of the operator, its freedom from trouble, its ability to accommodate itself to varying conditions.

The Waterloo Boy is a two-speed 12-25 tractor; is equipped with Hyatt Roller Bearings throughout; has dust proof, steel-cut gears, easily accessible, automatic lubrication, reliable ignition, our own patented kerosene manifold which gets full power from every drop of fuel; large, wide wheels give powerful traction without packing soil.

We will be pleased to send you our illustrated catalog which gives full description and many interesting views taken on the farms of users. Write for it.

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ECONOMY FEEDER
A perfect working self-feeder for hogs. A 100-lb. pig pays for it. Saves on purchase price, time, floor space, repairs and feed. Will feed 40 hogs. Sold direct, $18.50. Money refunded if not satisfied. For further information address, THE ECONOMY FEEDER CO., Box 436 New Washington, O.

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Write for prices, feeding directions, etc.
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IDEAL MEAT SCRAPS TRADE MARK

MORE WORK to the Gallon
HUBER

HERE is the tractor of utmost economy, the tractor that gets most from every gallon of fuel because the direct drive from motor to both rear axle and belt pulley saves power.

THE HUBER Light Four

is the right sized tractor for every sized farm. It is powerful enough to pull three 14-inch bottoms and turn an acre an hour, and light enough to work on plowed ground without packing it down.

Thousands of Huber Light Fours are in successful use. It is the tried and proved tractor. Huber owners are Huber boosters. For 40 years Huber has built steam tractors; and for 20 years gas tractors. The Huber Light Four is the best tractor Huber ever built.

It plows, harrows, drills, pulls a binder—does every type of heavy field and belt work *economically*. So simple a boy can run it, and anyone who knows an automobile can keep it in repair.

Every one interested in tractors should read the "Tractor in the Making," a reprint in booklet form. Tells vitally interesting facts about tractors. It is free for the asking. *Write for your copy today.*

Weight 5,000 pounds; pulls three 14" bottom plows; 12 h. p. delivered to the draw-bar; 25 h. p. at the belt; Waukesha four-cylinder motor; Perfex Radiator; Hyatt Roller Bearings; burns gasoline, kerosene or distillate; center draft; two speeds, 2½ and 4 miles per hour.

THE HUBER MFG. COMPANY
215 Center Street Marion, Ohio
Makers of the famous Huber Junior Thresher
SOME TERRITORY STILL OPEN FOR LIVE DEALERS

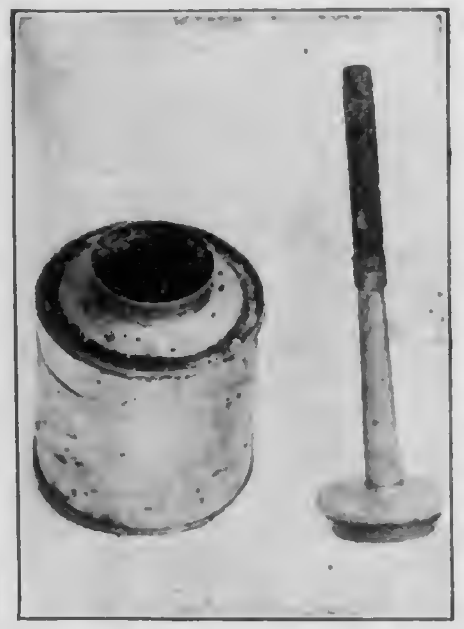
LIVE STOCK

Stomach Worm Treatment

As the time for treating sheep and lambs for stomach worms is here, I am enclosing photograph of what we consider one of the best outfits for drenching that it is possible to use. I have tried bottles, syringes and many other fixtures, but I think this outfit beats them all.

We buy from the hardware or agricultural machinery man, two or more common machine oil cans. Get those with a large opening in the top, having a hole about an inch and a quarter in diameter. This makes a can that is very easy to put the dose of medicine into; the top and nozzle being easily and quickly adjusted. The attendant mixes the dose and puts it in the idle can thus keeping the operation busy, and making the work very rapid. We cut the point off the tin spout of the oil can, at a point where it makes the hole about one-eighth of an inch in diameter, slipping over this a piece of one-fourth inch gas pipe, or what is commonly used for an extension on gas light fixtures. The reason we put this piece of gas pipe on the tin spout is that sheep or lambs will crush the tin spout, while the piece three or four inches long, of one-fourth inch gas pipe, makes a nozzle that they cannot crush or chew.

By holding the sheep's head up slightly, and inserting this pipe into the side of the mouth, the liquid will run down usually quite fast enough. If you wish to make the dose go out more rapidly, the spring bottom in the oil can forces it out very nicely. The dose, however, should be administered slowly, as the sheep and lambs are very easily strangled and a dose of medicine going into the lungs is very sure to cause death or serious trouble. I think, the cuts will explain fully, the apparatus and the way of handling it. I give the opening can, and the one ready to administer the dose, so that you may get the idea clearly. In preparing the sheep for treatment, keep them away from both feed and water from twelve to eighteen hours; and after treatment keep them away from feed and water at least six to twelve hours. Then they may have both water and feed or pasture.

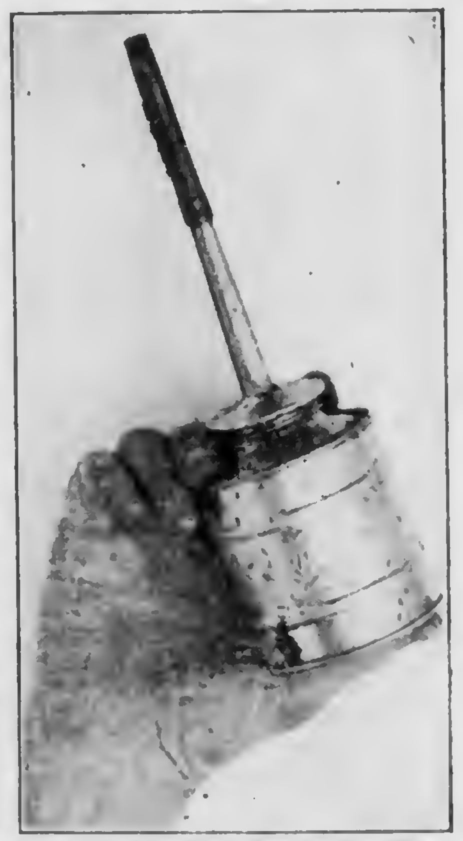


Note Wide Mouthed Can For Easy Filling

Gasoline Treatment

Dose, one tablespoon of gasoline, one tablespoon of linseed oil, in four or five ounces of sweet milk.

Each dose must be made up separately and kept well shaken in order to have the emulsion complete. For a four months old lamb, reduce the dose one-fourth; for a large one weighing one hundred pounds or more, increase the dose one-fourth. The dose given is for an average sized sheep. The dose should be repeated in about ten days.



The Dosing Can Ready For Use

Blue Stone Treatment

The other treatment used successfully is the copper sulphate or commonly known as the blue stone treatment: One ounce of copper sulphate to two quarts of water, and one ounce of mustard. Dose for lamb, one to one and one-half ounces; for yearling, two ounces; for mature sheep, two to three ounces.

This mixture can be made up in a large enough quantity to treat the number of sheep desired, but you must be very careful to keep the mixture thoroly stirred when you are measuring out each dose, as the blue stone or copper sulphate will go to the bottom and make some doses entirely too strong and others too weak.

The sheep should be kept from water and feed as recommended above in the gasoline treatment, and the dose repeated in about ten days.—R. L. Munce, Washington Co., Pa.

Some folks suffer from high blood pressure; and some spraying machines suffer from low air pressure. If your machine will not maintain a pressure of 150 pounds while in operation it will be good economy to junk it and get one that will.

Uncle Sam's agricultural department is telling farmers they should be able to buy their fall fertilizers for about 30 percent less money than they paid for the spring's supply.

EDUCATE THE COLT

The colt's education should begin early. Let him learn at the start that men are his friends. After he has found his legs and had a good meal, pay him a visit. After a day or two of your acquaintance, pet him a little and get him used to being handled and rubbed. When he is a month old, begin to halter-break him, putting the halter on him for a short time at first and allowing him to feel it.

He will soon allow the halter to be put on and taken off without objection. Then teach him to lead, not by pulling him, but by using a long strap or pair of reins and getting behind him. Some use a strap which runs thru the surcingle on the other side, so that a pull on the strap applies the urging where it will do the most good. This is even better than using the reins.

After the colt learns to lead well he will be ready for the training of the second winter, when he should be put into plain ordinary harness, with bridle and all complete. An old harness kept for this purpose serves the end well. Turn him into the barnyard for a short spell and let him fuss with the harness. Do this several times a week for six weeks or two months. Then put the good harness on him, and accustom him gradually. Then some day hook him in with the best and quietest horse you have. If his previous handling has been right he will walk off, taking his share of the load, light, of course. By the time he is thru his second winter he will be at home in the harness, and will hardly know that he was being educated.—Warner E. Farver.

WOOL POOLING PAYS

In certain sections of the fleece-growing states wool pooling has gained greatly in popularity. Small producers who formerly were unable to market their wool as individuals in a profitable manner can now combine with their neighbors and produce a sufficient supply of graded, quality wool to make it attractive for the eastern wool merchants to bid on these fleeces. During the last year the various cooperative associations have sold their wool for prices ranging from 1 to 8 cents premium a pound above the prices offered by the local buyers for the same clips.

U. S. LEADS IN SWINE

According to Dr. J. R. Mohler, Chief of the Federal Bureau of Animal Industry, the United States contains considerably more than one-third of all the swine in the world. Swine are less numerous than either sheep or cattle in the world at large, but are more numerous than either in the United States, which this year has more hogs than its 10 nearest competitors combined.

Latest reports from department representatives in Europe indicate that pork importation by the United Kingdom may be considerably smaller in the future than during the war, price being an important factor. In general, it appears that American fresh pork products have met with favor on the British markets, but there is room for improvement in the curing of hams and bacon. It is reported from France that the swine industry there decreased most rapidly between 1913 and 1916, but the decrease since 1916 has been comparatively small. Rapid recuperation seems possible with a good grain and potato crop this year and a continuation of present high prices. While the best grades of American hams and bacon met with French approval, it is said that these products are too expensive for the average French family. It is not likely that France will import breeding swine to any large extent, altho continued importations of meats and fats are expected.

South America, on the other hand, is importing swine from the United States with considerable regularity. Since the first of this year there have been seven purchases and shipments ranging from about 30 to 70 head each of purebred stock for breeding, in addition to a number of smaller shipments.

EARLY FATTENING FOR PROFIT

In the old days it was customary to keep hogs much longer than at the present time. Farmers have learned that the only way to make the business pay is to push the hogs rapidly, develop a maximum of growth in a few months, and get the hogs onto the market before they are a year old. The average age of the hogs which go thru the market in Chicago is less than nine months, which shows that the western farmer is fully alive to the economical advantage of quick, substantial growth. The average weight of the hogs which pass thru the market in Chicago is 220 pounds.

Farmers who keep only a few hogs and have not looked carefully into the matter of production costs, sometimes hold their animals for two years. This is a mistake and practically makes it impossible for a profit to be shown. When corn was selling at from eight to twelve cents a bushel it may have paid to keep hogs more than a year, and to grow them larger than the average at the present time. Now conditions are altogether different, and careful experiments have shown that while very rapid growth is made in the first eight or nine months, a very much larger proportion of grain is necessary to keep up the gains after that period has passed.

Prof. . C. McNutt reports some interesting experiments to illustrate this fact. He says that the greatest proportionate gain in weight is made when the pigs are suckling. By keeping weight averages it has been found that a pig which weighs from one to one and a half pounds when born should weigh 12 pounds when six weeks old. When three or four months old the pigs begin to eat grain, and 100 pounds of grain feed at that time will give more increase in weight than ever after.

With good pigs, given good care, 100 pounds of weight is put on with only 350 or possibly 400 pounds of feed. At seven or eight months, from 600 to 650 pounds of grain must be fed to produce 100 pounds of increase in weight. Obviously the amount of grain which a pig must have steadily increases. After a while growth stops, but the appetite of the animal seems as insatiable as ever. Careful farmers have come to realize that nine months is the limit of time for keeping a hog, looking at the matter from the standpoint of profitable feeding.—E. I. Farrington.

Being well-dressed depends not so much upon the money spent as upon the ability of the wearer to select appropriate designs, materials and colors that are suited to individuals needs.

Farmers Have Known and Used "Nice" Paints For 40 Years

—the same high quality prevails today as ever

—and always will prevail.

Farmers have come to know that in using *any* Nice paint they are using the best—yet moderate in price.

For 40 years and more we have been manufacturing ready mixed paint—always with one prime thought in mind—to satisfy the customer.

Their hard wearing qualities and durability have made it possible for us to build among farmers a very substantial trade.

We appreciate this business—and we believe that our farmer friends appreciate the high standard of paint making that is represented in every Nice product.

Nice quality will continue to be as it always has been—*good*, in fact, the best that can be manufactured.

Your dealer can supply you, or write us direct.

Our Booklet "Paint Pointers" is worth sending for. It will help on any paint job that you contemplate, whether inside or out. Full of practical, honest information. Send for a copy---free.

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Gombault's Caustic Balsam

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A Safe, Speedy, Positive Remedy for

Curb, Splint, Sweeny, Capped Hock, Strained Tendons, Founder, Wind Puffs and Lameness from Spavin, Ringbone and other bony tumors. Cures skin diseases or Parasites, Thrush, Diptheria. Removes Bunches from Horses or Cattle.

As a Human Liniment and Antiseptic for external use it is invaluable.

Every bottle of Caustic Balsam sold is warranted to give satisfaction. Price $1.75 per bottle. Sold by druggists, or sent by parcel post, with full directions for its use. Send for descriptive circulars, testimonials, etc. Address

The Lawrence-Williams Co., Cleveland, O.

HAY
W. D. POWER & CO. 601 W. 33 St., New York,
are the largest handlers of commission hay in greater New York; if you have hay to dispose of communicate with them.
HAY

YOU CAN'T CUT OUT A BOG SPAVIN OR THOROUGHPIN
but you can clean them off promptly with

ABSORBINE
TRADE MARK REG.U.S.PAT.OFF

and you work the horse same time. Does not blister or remove the hair. $2.50 per bottle, delivered. Will tell you more if you write. Book 4 R free. ABSORBINE, JR., the antiseptic liniment for mankind, reduces Varicose Veins, Ruptured Muscles or Ligaments, Enlarged Glands, Wens, Cysts. Allays pain quickly. Price $1.25 a bottle at druggists or delivered. Made in the U. S. A. by
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HEAVE, COUGH, DISTEMPER AND INDIGESTION COMPOUND
STANDARD REMEDY
Cures Heaves by correcting the cause—Indigestion. Prevents Colic, Staggers, etc. Best Conditioner and Worm Expeller. 37 years sale. Three large cans guaranteed to cure Heaves or money refunded. The 1st or 2nd can often cures. $1.15 per can (this includes 5c war tax) at dealers' or prepaid by parcel post. Booklet free.
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Cure the lameness without scarring the horse.
Fleming's Spavin Liquid
$2.08 a bottle (war tax paid)—special remedy for all soft blemishes—Bog Spavin, Thoroughpin, Splint, Curb, Capped Hock, etc. Easy to use, only a little required and money back if it fails. Write for FLEMING'S FREE VEST-POCKET VETERINARY ADVISER.
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HAY Ship To The Old Reliable House
Daniel McCaffrey's Sons
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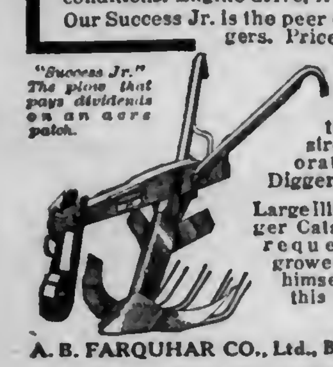
DIG YOUR POTATOES THE FARQUHAR WAY

No. 1 Elevator means larger profits for growers.

A Farquhar Digger will get you more marketable potatoes, and besides save much labor. These machines are sufficiently strong to stand the strain of hard continuous usage. They dig clean, and leave the potatoes convenient for picking.

The No. 1 Elevator shown above has paid for itself in one season for some users. Rigid tongue construction holds Digger steady on the row avoiding cutting. Either Cross Bottom or Angle Bucket Elevator to suit different soils. Larger size Elevator Diggers for deep planting and bad conditions. Engine drive, if desired.

Our Success Jr. is the peer of Plow Diggers. Price so low within reach of the smallest grower. The Gilt Edge for those who desire a more elaborate Walking Digger.


"Success Jr." The plow that pays dividends on an acre patch.

Large Illustrated Digger Catalog free on request. Every grower owes it to himself to send for this booklet.

A. B. FARQUHAR CO., Ltd., Box248 York, Pa.

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The PERFECT CORN HARVESTER

Sold Direct $20.50 JUST the THING for SHOCK or SILO CUTTING

Works in any kind of soil. Cuts stalks, does not pull like other cutters. Absolutely no danger.

Cuts Four to Seven Acres a Day with 1 man and 1 horse. Here is what one farmer says:

Gentlemen:—I cut corn with the Perfect Corn Harvester, used it myself and thought it a success to fill the silo. Yours truly,

ELI S. MANN, Washington Boro, Pa.

SOLD DIRECT TO THE FARMER

Send for booklet and circulars telling all about this labor-saving machine; also testimonials of many users.

LOVE MANUFACTURING COMPANY
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W. C. Downey & Co.
SPRINGFIELD, OHIO
MANUFACTURERS

Quality Bale Ties
SINGLE LOOP CROSS HEAD

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Order your Bale Ties today. We guarantee immediate shipment. Prices right.

CORN HARVESTER Self Gathering for cutting Corn, Cane and Kaffir Corn. Cuts and throws in piles on harvester. Man and horse cuts and shocks equal to a Corn Binder. Sold in every state. Price only $25 with fodder binder. The only self gathering corn harvester on the market, that is giving universal satisfaction.—Dexter L. Woodward, Sandy Creek, N. Y. writes: "3 years ago I purchased your Corn Harvester. Would not take 4 times the price of the machine if I could not get another one." Clarence F. Huggins, Speermore, Okla. "Works 5 times better than I expected. Saved $40 in labor this fall." Roy Apple, Farmersville, Ohio: "I have used a corn shocker, corn binder and 2 rowed machines, but your machine beats them all and takes less twine of any machine I have ever used." John F. Haag, Mayfield, Oklahoma. "Your harvester gave good satisfaction while using filling our Silo." K. F. Ruegnitz, Otis, Colo. "Just received a letter from my father saying he received the corn binder and he is cutting corn and cane now. Says it works fine and that I can sell lots of them next year." Write for free catalog showing picture of harvester at work and testimonials.

Process Mfg. Co. Salina, Kan.

Hoffman's Seed Wheat

Nine reliable kinds—hardiest strains—yield more per acre—require less seed. Sound—graded seed—cleaned clean, free of cockle, rye, smut, garlic. Prices are just.

Write for free Catalog and samples. Mention this paper.

A. H. Hoffman, Inc., Landisville, Lanc. Co., Pa.

HORTICULTURE

RASPBERRIES A PROFITABLE CROP

New York stands first among the states in raspberry production, and just now the growers of this fruit are harvesting one of the largest crops they have ever grown. Owing to the mild winter there was little winter killing of the bushes, and the growing season has been favorable to the perfect development of the berries.

Never before have the growers received such remunerative prices as they are being offered this season. Some growers in Wayne, Ontario and Yates counties, which lead in raspberry culture, have contracted their black and purple raspberries at 20 cents a quart in the field, the buyers furnishing the crates and baskets and hauling the fruit to the shipping station or preserving plant.

In Yates County many of the growers have evaporators, and local buyers are offering them from 90 cents to 95 cents per pound for the evaporated fruit. Buyers of fresh fruit are offering 25 to 30 cents per quart. Red raspberries are retailing in Rochester at 44 cents a quart, and black raspberries at 38 cents a quart. The prevailing price for picking raspberries this season is four cents a quart, which gives the pickers a fair wage. A good picker will average about 100 quarts per day.

There is some curiosity as to the cause for the rapidly increasing demand for black raspberries. The preserving plants are using immense quantities. Considerable quantities of the dried fruit in years past have been purchased by wholesalers, who packed it in one pound cartons for Western trade, and this may be done on a more extensive scale this season. It is claimed, however, that the high price paid for these berries is due to their use in the making of fast-color dyes.

Raspberries are not as particular in regard to soil as some other fruits. Heavy clay soil and soil poorly drained are not suitable for raspberries, altho red raspberries will succeed better on heavier soils than do black raspberries. Sandy and gravelly loams are preferred by Western New York growers.

Red raspberries are set in rows seven feet apart and the plants two feet apart in the row. In a short time the plants form a continuous row, and thoro cultivation is necessary to keep them from filling the space between the rows.

Black and purple raspberries should be planted in rows not less than seven feet apart as they make a rank growth, and yield heavily. Among the red raspberry varieties the Cuthbert has long been the most popular variety thruout the state, but the Empire State, a new variety, is pushing to the front especially in the Hudson River valley. The June, an early variety first propagated at the Geneva station, is being planted quite extensively.

The Plum Farmer has become one of the best-liked black raspberry varieties in Western New York, because of its robust growth and heavy yielding quantities. Honey Sweet, a new variety, introduced this season, is a promising berry. It is not only a heavy yielder, but the quality and flavor of the fruit are said to be far superior to the older sorts. The Ohio, Cumberland and Kansas are grown extensively for drying and preserving. The Columbian is the leading purple berry, being a favorite with the canners.

The present high prices will no doubt lead to the planting of many acres of raspberries in all the berry districts of New York state the coming fall and next spring.—E. E. R.

Blight Destroys Lower Leaves of Tomato First and Works Upward

HIGH FRUIT PRICES DUE FOR SEVERAL YEARS

That the high prices for small fruits will continue for several years because of the unusual demand and the scarcity of labor is the opinion of W. J. Green, horticulturist at the Ohio Experiment Station. The contracting of immense quantities of fruits for ice cream concoctions and the decreasing acreage are also given as factors leading to high-priced fruits.

"Farmers have almost ceased to grow many of the small fruits or at least produce only enough for their own use so that the public look to the small fruit gardener for their supply. Even tho the prices of fruit have almost quadrupled in the last decade the small fruit gardener has not been able to increase his acreage fast enough."

"People having small tracts of land may grow their supply much more cheaply than they can purchase small fruits and at the same time produce fruits of the highest quality which is not always possible to secure when a commercial supply is relied upon."

MEMORIAL TO APPLE TREE ORIGINATOR

To commemorate the originator of the Rome Beauty apple, the Ohio State Horticultural Society held a memorial meeting dedicated to H. N. Gillett, who was instrumental in the propagation of the variety.

The original Rome Beauty tree, which stood on the bank of the Ohio River until 1860, when it was swept away by a flood, was derived from a freak graft. The sprout was given by Joel Gillett to his son who set it out in the corner of a field near the Ohio River.

When the tree began to bear fruit it was found to produce apples of such excellent quality that it was named Rome Beauty—Rome from the township, and Beauty from its appearance.

The Rome Beauty variety has retained its position as the foremost commercial apple of southern Ohio because of its adaptability to soils and locations and attractive appearance when displayed for sale, horticulturists state.

MACHINE-SIZED APPLES FAVORED IN MARKETS

Due to the demand of uniform apples in commercial markets, apple grading or sizing machines have been found to be a profitable investment, according to tests carried on by the Ohio Experiment Station. The graders or sizing machines are placed in commercial orchards and as soon as the apples are picked they are assorted into respective grades before they are barrelled.

Machine-sized fruit from orchards operated by the Ohio Experiment Station sold to buyers for about 30 cents a barrel more than was paid in the same section for hand-sorted fruit. In addition, another grade of apples was secured for the making of apple butter which formerly would have been sold as cider apples at a low price if the grading process had not been adopted. The capacity of the ordinary grading machine is about 150 barrels per day.

CANHOUSE TOMATOES TO BRING HIGH PRICES

The early tomatoes for market are selling at extremely high prices so that there may be very little of the crop to get "cleaned up" for the canhouses. This means a reduction of many thousand tons to go to the canners. Furthermore, the tomato crop which is planted expressly for the canhouses is expected to be very short. In the first place the acreage planted is reported to be reduced about forty percent from last year's crop. The crop will be late, due to the severe drough which lasted from early in May until the latter part of June. Usually, late planting results in a lower yield than early planting. As it appears at the present time, all growers who have contracted at the prices offered by the canners, will lose money. Very dependable growers are predicting a dollar per basket (20 quarts).

Members of the Tomato Associations are delighted because the associations ignored the low prices offered by the canners and because the associations recommended a reduction in the acreage. It is very likely to result in a splendid open market price. The growers will have an opportunity to make a profit on a small acreage whereas they might have had a job to pay for the picking if they had planted as many as they planted last year.

At this time it is well to realize that the yield of canhouse tomatoes depends very largely upon two things besides moisture. They are plant food, and blight. Most farmers can see the blight along in September when it has destroyed all the foliage and in many cases scarred the undersized tomatoes (figure B). However, the blight usually begins its development in July. The illustration (figure A) shows a large well developed plant July 27, 1918, just as it was ready to set blossoms. It will be noted that the lower leaves have wilted and sagged down. If this is carefully noted in the field at this time, brown specks the size of clover seed will be seen on the lower leaves. Where the specks are close enough togther, the leaf becomes brown, wilts and gradually dies. In the mean time the disease continues to attack new leaves higher up on the plant until the foliage is ruined and the growth severely checked. A period of rainy or muggy weather favors the more rapid development of the blight. That is why old tomato growers sometimes say that they would have had a very fine crop but the spell of damp weather followed by sunshine rusted the leaves. That shows accurate observation, but the truth is that the damp weather simply favored the rapid development of the blight so that the weather was only indirectly responsible. On the other hand, a moist soil and dry weather, such as we had in 1917, favors the production of a heavy crop and prevents the development and spread of the late blight. While late blight is a great crop reducer, it must be remembered that blight has a team mate or partner. It is starvation. Of course, everything is blamed on the foggy weather which means that the blight destroyed the foliage. No grower will ever blame himself publicly or privately for having made stingy applications of plant food.

It is definitely known that at least 75 percent of the canhouse tomato fields in Delaware, Maryland, New Jersey, New York and Virginia could be made to produce a more profitable crop if the farmer would apply at once a side dressing of a quick acting fertilizer. Perhaps the very best material would be 75 to 100 pounds of nitrate of soda alone, or mixed with 200 to 400 pounds of acid phosphate. It could be sowed between the rows by hand and be harrowed into the soil. The material dissolves in the soil moisture just as sugar disappears in a cup of coffee. Therefore, the plant roots would be benefitted at once. The yield would be greatly increased because the plants would be better able to produce fruit because the growth would be quicker and because the increased strength of the vine would enable it to resist and oppose the progress of the destructive blight.

Furthermore, the side dressing of fertilizer would be of great benefit in building up the soil. Many farmers fail to get a catch of cover crops because their soil is too nearly exhausted of its plant food to permit the cover crop to get started. Every one has seen a heavy growth of grain where fertilizer had been applied in rows for potatoes. Sometimes the grain makes very little or no growth between the rows. Therefore, the side dressing of quick acting fertilizer may be paid for several times over by the tomato crop especially when prices are expected to be very high and then the fertilizer would cause a permanent improvement in the soil by helping to make a heavy growth of the cover crop.

It is not claimed that this recommendation will work in every field. However, the idea is surely worthy of consideration by a large majority of the growers. When manure has been generously applied from a dairy or poultry plant, it may be that an application of nitrogen in any form would favor excessive leaf growth. In that case, acid phosphate alone (200 to 400 lbs.) might be particularly helpful in increasing the set of fruit.

Prospects were never brighter for high prices for the tomato crop. Frequent cultivation during the next very few weeks should have a direct effect upon the yield. The growers who provide the best growing conditions for their crops become the most prosperous farmers.—R. W. De Baun.

Leaves Entirely Destroyed by Blight

One thing which a cow testing association enables a dairyman to do: To sell his cows to better advantage. Carefully kept records of good animals usually increase their selling price 20 to 25 percent.

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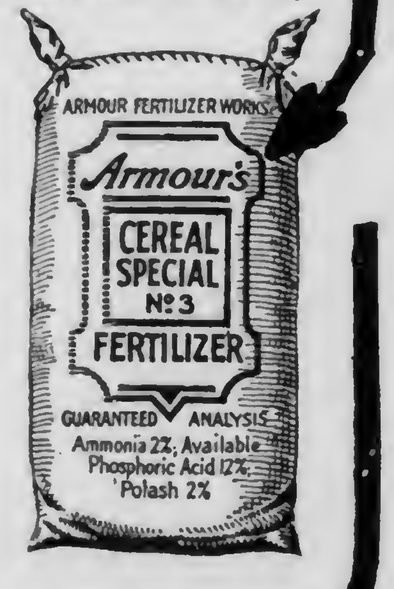

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POULTRY

BANDING THE BREEDERS

The culling of the farm flock is simplified if the hens all wear bands. Three colors of bands will usually be sufficient. One color can be worn by the pullets, another by the year-old hens and the third by the two-year-old hens and this eliminates the danger of marketing pullets and keeping hens that are two years old until they cease to lay and possibly die of old age.

It is difficult to tell the year old from the two year old hens if they are not banded. Sometimes an old hen will have an appearance of younger years and she will be kept longer than she can be expected to be a profitable egg producer. It is also difficult to separate pullets from year old hens a short time after the pullets have reached maturity. For a long time the farmer will frequently observe a flock of young pullets from old hens running together and believe that he can tell them apart. Then in a period of a few days a great change takes place in the young birds and suddenly it is almost impossible in a large flock to accurately separate the flock according to ages. Of course there are ways of forming judgment as to the age of a bird but in a large flock it is much easier and quicker to look at the colored band and know the age of the bird at once.

Bands with numbers are necessary when the birds are trap nested. These bands must be carefully attached to the bird's legs so that they will not come loose and spoil a breeding record. Sealed bands are sometimes used by breeders who wish to do very fine breeding work and take no chance of errors. Even when the birds are not trap nested it sometimes pays to attach numbered bands as this helps to designate certain breeders which may come from special hatching eggs. Certain numbers might designate birds of unusual breeding which will be worth keeping over for two years while the other numbers might mean that the birds will probably not be worth keeping beyond the pullet year.

Small chicks can be marked in a satisfactory manner with the toe punch but after they feather out the bands are more practical as they give the poultryman the age of the bird at a glance. The bands are of value in selecting broody hens. The year-old hens will be better mothers than pullets and the two-year-old hens which have raised one or two broods of chicks will be more desirable than the year-old hens. It pays to band the breeders because the small details in poultry breeding are important and the poultryman must know his flock.—R. G. K.

Wyandottes: Favorites Where Meat and Eggs Are Desired

THE HONEY MARKET

Hunting a honey market may not be as difficult as the beginner in the apiary imagines. More than likely it is very near your own door if you but look the right way. The easiest way to find it is to offer a prime article, and customers will be as easily attracted, as are the bees if you happen to leave it where they can gain access.

Be careful in preparing it for market. Place the sections which are entirely filled as firsts, and those which have cells near the edges not filled as seconds. The scales should be at hand so that a guarantee can be given that each box does not go below a certain number of ounces. Remove all propolis from the section by means of a tool provided for the purpose or a dull knife. Use new sections. The bees seem to take more pride in making the comb perfect when working upon the new wood. Keep the white honey separate from that of amber or dark color. It is the favorite with most people, tho occasionally a customer has a preference for buckwheat honey,—of which fact it is worth your while to make a note for future use.

Some customers are willing to pay the fancy price for combs mechanically perfect; others fond of honey are glad to get those a bit irregular in form, since the honey is just as good,—of course at a slight discount. An advertisement in the local paper, a bulletin board at the gate, or the telephone informing old customers when the honey is ready to take off will bring results. If you dislike individual hunting, the local dealer is generally glad to dispose of all the honey you have to spare if it is of prime quality.—Bessie L. Putnam.

GETTING RID OF LICE

In your issue of July 19, 1919, you advise getting rid of chicken lice by dipping them in a solution. This would be a good deal of trouble. For ten years I have had no trouble with chicken lice as I have used a suds made from fish soap, sprayed over the nests, roosts and house. Two applications will clean the lousiest house I ever saw. In making the suds, simply shave the soap in a pail of cold water and stir thoroly, and use freely.—D. J. M.

HOW TO DETECT TUBERCULOSIS IN FOWLS

It should be kept in mind that tuberculosis of fowls is a distinct disease from tuberculosis of other farm animals, and of the human; and so far as known, is not communicable to man. To aid the poultry raisers to recognize the disease, a few of the main characteristics are given herewith.

While the disease cannot be positively recognized by external symptoms, suspicion of the presence of avian tuberculosis should be aroused if any bird shows steadily increasing emaciation; pallor of wattles, comb, and skin about the head; weakness; lameness; or ruffling of feathers, with some diarrhea. Emaciation, weakness and lameness are its most common external symptoms, altho some birds may be seriously infected without showing outward symptoms. One poultryman reported that some of the birds dropped dead from the roosts, with very little previous indication of disease.

If tuberculosis is suspected, a post mortem examination of one or more of the emaciated birds should be made. The characteristic lesions found in a diseased bird are "tubercles" or nodules. These tubercles will be found most frequent in the liver and spleen, and on the intestines, and very rarely in other organs. The tubercles in the liver and spleen are imbedded in the substance of these organs but show upon the surface as slightly raised white spots varying in size. The tubercles on the intestines are more striking in appearance; they are distinct, wart-like growths varying in size from a small shot to large well defined conglomerate tumors, an inch or more in diameter—outgrowths from the peritoneal surface of intestines. White or yellow spots on the liver may occur from other causes than tuberculosis, (as in the disease of turkeys, known as "blackhead"); but if nodules such as have been described are also found in the spleen and on the intestines, the diagnosis of avian tuberculosis can be regarded as fairly well established. It is advisable, however, to have the diagnosis confirmed by competent veterinary examination.

DUCKLING LOSSES

I head read the article in a recent number about some one losing so many ducks, and rather think it is not caused by what they eat. Two years ago I hatched (under hens) 46 ducks and after a time 43 died. We also had sold a number of eggs to neighbors who lost theirs. Naturally I began to think our stock was not strong. However, as a test, in June I set 9 more eggs under a hen, and in July 8 ducks hatched and 8 ducks lived to maturity which I felt proved it was not weakness in stock. We decided it was caused by cold wet weather. Since that time I set the eggs so they will hatch not earlier than June and have very little trouble. This year one showed a little lameness and I rubbed legs gently with a little witch hazel. The lameness disappeared. They should have dry quarters at night, and not allowed to paddle in water until quite large. A stream runs near our poultry and we have to watch them up closely while they are out on free range. I have a grassy yard for their run and do not allow them out until we have time to keep them away from the run.—A. Reader.

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Outdoor Vistas vs. Blank Walls

Our latest and very greatest little improvement consists of a glass put in the front door opening onto the porch from the dining room. Our rooms are finished in dark wood, and the windows are too small to give good light and too high up to give a view of the prettiest thing about our place, a really good lawn and some beautiful shrubs. We had long talked of putting in this glass but had been too busy to see to it. Had we dreamed of the great transformation it would make not only in the greater cheer at meal times and the general "morale" of the family, I am sure that we would have attended to it long ago. This is said for the benefit of those of you who may be in similar need of an opening to let yourselves look outdoors.

When we finally came to see that we really needed this glass in the door, husband being handy with tools and at carpenter work, set at the job. We found war-time plate glass prices rather staggering, but a friend who is a builder said that plate glass it must be because the extra big old-fashioned handmade door demanded a glass too large to be safe for even double-thick ordinary window-glass, especially as by its being opposite another outside door on the other side of the house, the door was given to slamming at times. But he told us where we could get some second-hand plate glass cut down from a broken store window. This cost us $6; about 20 cents worth of bead stops, with a few long slender finishing nails were all the extra outlay. Husband did the job in about an hour and a half.

This beautiful clear white glass, with the appearance of not being there at all, is an hourly delight to every member of the family. Husband said today: "If I had to have that door space filled in again with wood, I would not do it for $50, would you?" To which I certainly agreed. When every member of the family prefers to read and work about the dining room table, both day times and evenings, as we do at our house, and papers and books, pens and ink, string and even slippers and outdoor garments will get left about for an extra busy housekeeper to keep in order, that personage had not always been able to keep her family in order and under the discipline that would present a circumspect appearance to a caller stepping on the front porch until this new glass in the door came to her rescue. I have cannily decreed that I will permit no obscuring lace curtain over this glass to tempt my family back into their old careless ways with their belongings.

The brilliant light that now floods the room shows every particle of dust, so one just naturally falls into more careful grooming of this chief living room of the house. Thus, you see, how the glass has contributed to better habits and housekeeping in our family.

It was very easily put in. The panels of the door were held in place by moldings on the inside. These were removed, and the panels cut out even with the main top, sides and cross-sections of the woodwork, leaving a flat edge 1½ inches wide. Some narrow bead stops of soft wood were bought at the lumber mill of a size to fit this 1½-inch edge on each side of the thick glass. The outer stop was nailed in place first, sinking the nails only part way to make it easier to remove them if a fit was not secured at first. Then the glass was lifted in and the stops on the inside nailed in. Then, the glass was lifted in and the stops on the inside nailed in. Then, as the fit was perfect, the nails were sunk in the wood ready for puttying and painting.

We plan now to remove the dark finish of this woodwork, which is merely imitation hardwood, tho well done and in good preservation, and replace it with white paint, as the latter is so much more cheerful, and will give the furniture so much better background.

Electric Lights Make Evenings Pleasant and Work Easy

This glass in the door has been so successful that I am having a glass put in my kitchen door, in this case just a double-thick ordinary window glass, as it is much smaller, and not so liable to break. This costs us $3.80. This is a thiner, factory-made door, and the removal of the panels will be a little more difficult, but the process will be similar. Then, too, I am to have an additional window cut in the wall beside the head of my bed. Because of necessary furniture that has to stand there, this window will be about 3½ feet from the floor, and will be placed the longest way horizontally, and open with a hinge at one side. This will give us much better ventilation, especially on summer nights, and also much better light. Last year we put in a window similarly in an upstairs bedroom under the eaves, and it had to be close to the floor. This gives a good view of the lawn, and the front walk and the always closely watched mail box. The transformation was remarkable, not only in making this room 100 percent more desirable as a sleeping room, but in light and cheerfulness. The cost of this improvement was about $5.80, handy husband again saving the labor bill.

As to the value of housekeeping convenience and comfort, we were face to face this winter with having to move to town where housekeeping conveniences are more a matter of course, or with putting in adequate heating, lighting, water and toilet equipment, or else a real physical breakdown for the housekeeper under former conditions of attending to stoves, and suffering their uneven temperature and litter, outdoors water supply and that none too certain, frigid outdoor toilet, and no bathroom or tub. A long siege of haunting doctors' offices and some hospital experience made it clear that my burdens must be lessened and our living conditions improved at once.

They Put In a One-Pipe Furnace

It was too late to put in a water system last fall when we arrived at the conclusions above indicated, but as one first-aid measure we put in a one-pipe furnace, and my heating cares and work have lessened about nine-tenths, while the entire house has been as warm and cozy as we could wish it, both night and day. There hasn't been a cold in the family. And the coal used has been far less than was ever used in this house in any winter before since we have lived here, tho of course the mild winter must be credited with a good measure of this saving.

Temporary indoor toilet arrangements were made for the winter to do until we can put in a water and sewage system. And a bath room was built with drainage to a septic tank as soon as it can be constructed. There is also a dumb waiter under the new white kitchen sink. The improvements already installed have very materially improved my health because they have lessened my work so much, and made the house so much more comfortable, and made it possible to take care of oneself much better. The matter of the indoor warm toilet has a great deal to do with keeping health normal.

We had thought that we would finish paying for the farm before we put in any such improvements, but now we see how foolish and uneconomical that would have been under the circumstances. And I do not think that the circumstances in most farm women's cases would any more justify going without the things that will make better health and convenience for the mother. The war-time strain on many a farm nearly prostrated many a farm wife the past year, so this year let us plan for just enough garden work to meet our family needs, and cut down other heavy work outdoors and indoors, and give ourselves more play times the coming summer, and spend more time planning how to make our work easier. — Rejuvenated Housekeeper, Tompkins Co., N. Y.

HOW I LENGTHEN MY MORNING NAP

The day is plenty long enough for any farmer's wife even tho she may not rise as early as did her mother and grandmother. I have found it comparatively easy to lengthen my morning nap at least half an hour by careful planning and doing some of my breakfast getting the previous evening. Farmers who are doing hard work can not exist on the breakfast of prepared breakfast food and a cup of coffee that suits their city cousins. They require something substantial. As a general thing we prefer the cooked breakfast foods, so I usually cook the oatmeal or cream of wheat for about ten minutes the evening before and leave it standing in the double boiler all night. The boiler is made of aluminum so that it will not rust or be injured in any way. In winter we burn hard coal and keep fire in the range all night. In the morning my husband gets up and turns on the drafts, and my double boiler, setting on the stove, is cooking merrily by the time I get down stairs. (See what I say further on about fireless cooker substitute for this double-boiler work.) But in summer I use the coal oil stove, and my husband is too busy to even stop in the kitchen. As my breakfast food is partly cooked it does not require more than about 15 minutes more cooking. When I get up, about an hour before I want to serve breakfast, I slip a kimono over my night clothes, run down to the kitchen and light the burners under the double boiler and the coffee pot, in which I have water for coffee, then go back up stairs to dress. When dressing is accomplished the breakfast food is cooked and the water is boiling so that I can make the coffee at any time. I boil coffee just five minutes, so that in a short time that important article of the breakfast menu is ready. If I want warm rolls, they are baked the day before so I put a damp cloth over them and slip them in the oven and in a few moments they are ready. If muffins or griddle cakes are on the bill of fare, the evening before I mix the dry and liquid ingredients separately, and in the morning it only takes a moment or two to prepare them. Bacon or ham are sliced the evening before and placed in the pan ready to be set on th stove the first thing.

The table in the dining room is made ready the night before, and all the dishes I shall need to prepare and serve the meal are placed on the kitchen table the last thing before I go to bed. When my husband has finished feeding the stock and the man has finished milking I have fed the poultry and breakfast is ready without any hurry or flutter, and I have not got up in the "clouds of the night," as my mother used to say, to do it either. I do not have a fireless cooker, but I mean to have this time and fuel saver just as soon as possible. I believe in farm women having every labor-saving device in their kitchens that they can possibly afford, just as their husbands do in the barn and field. It is money well and economically spent and will pay dividens to the housewife in health and increased efficiency.—Mrs. Chas. Atherton, Center Co., Pa.

ANOTHER HINT TO RUG MAKERS

I was very much interested in the article on rugs in a recent issue of the Pennsylvania Farmer. It recalled to my mind the rugs Mother used to make. Instead of buying the canvas she washed a common potato sack and stretched it on a frame made to join together like quilting frames. When she did not have chalk to mark the patterns she cut or folded paper the desired shape and pinned these patterns on the burlap. After outlining the pattern with black she took the paper off.

Then there are the knitted cushion tops, afghans and rugs, for which bits of velvet, silk, worsted or short scraps of yarn may be used to good advantage, and the tiniest pieces can be knitted in. It is easier to knit in ten-inch squares; then when enough are made sew together on the wrong side and shear the top. They are beautiful either in solid colors or hit or miss.

A Restful Farm House Lawn

Following are the directions: Two No. 3 celluloid needles and white cotton yarn same as used by the Red Cross for wash cloths. Cast on 61 stitches, knit across twice; then 3rd row knit one, place a piece of the silk or wool between the needles, knit one, draw the other end of the silk thru toward you, which is the right side. Knit one. The two ends of the silk will be on the side next to you, and the under side will be smooth. Knit one between each time, and one plain row between each row of filling. The pieces need not be longer than an inch, and the size of coarse yarn, so the tiniest snips may be used up.

I learned to do this work when a child, and as my square gained in size it became very fascinating. I had the pleasure of seeing some of these hooked rugs that were made of all wool (the kind of yarn used in the very heavy sweaters) in beautiful designs and colorings. They were displayed in the window of one of our department stores, and had been made by American soldiers interned in Switzerland. The edges of the rugs were overcast over an inch-hem; some were plain and some were fringed on the ends. The wool was left about one-eighth inch in length. I am sure any one could make these at home. The heavy old sweater yarn could be used with old woolen socks and stockings cut the desired width and hooked in.—Mrs. E. A. Kern, Lackawanna Co., Pa.

HANDY SPONGE CAKE RECIPES

While this is the season when eggs are cheaper and more plentiful, still they are a fairly good price, and even now I like to use recipes that are economical with them. A short time ago I got three, which I found especially good. Two are sponge cakes, of which my family are especially fond, and which we have often had to forego on account of the large number of eggs which they usually call for. Did you ever hear of a good-sized sponge cake made with two eggs? I never did before, but I can assure you that results are most gratifying.

Two Good Sponge Cakes

Beat yolks and whites of two eggs separately, add ½ teaspoon vinegar and 1 scant cup sugar. Beat these ingredients together. Sift together 1 cup of flour, 1 rounded teaspoon baking powder and ½ teaspoon salt. Add gently to the other mixture. Lastly add ½ cup of boiling water, stir until smooth and bake in a moderate oven.

This second sponge cake recipe is more lavish in the use of eggs. Five are required but two large cakes are the result, so that it is really quite inexpensive. Beat together 1½ cups sugar, ½ cup water, 1 teaspoon lemon extract, 5 egg yolks. Sift 3 level teaspoons baking powder with 2 cups of flour, and add to the first mixture, and lastly fold in the well-beaten whites of the 5 eggs. Bake in moderate oven.

Feather Cake

Take 1 level cup sugar, 1 tablespoon melted butter and ½ cup sweet milk. Mix well together, add pinch of salt and any desired flavor. Beat white and yolk of 1 egg separately and add to mixture. Lastly sift together ½ teaspoon soda, 1 teaspoon cream of tartar, and 1 cup flour. Stir till smooth, and bake.—Mrs. Chas. Atherton, Center Co., Pa.

SOAP SOLUTION

Soap solution makes suds more quickly than soap in the cake; it cleans more evenly and with less wear to the material than soap rubbed on. Make up a quantity for use as needed. Use up bits of soap in this way.

Dissolve 1 cake white soap or 2 cups soap flakes, chips, or scraps in 3 quarts of hot water. For blankets add 2 tablespoons borax and ½ cup ammonia.

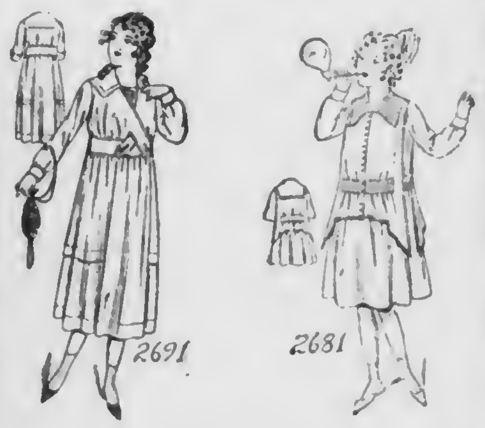
Fifty years ago farming was largely a matter of muscle. Today brains also count.

Excepting poor lubrication or an overload, dust is the tractor's worst enemy. The one place for the cleaner is on the machine, not buried in the weeds of some fence corner.

PENNSYLVANIA FARMER PATTERNS

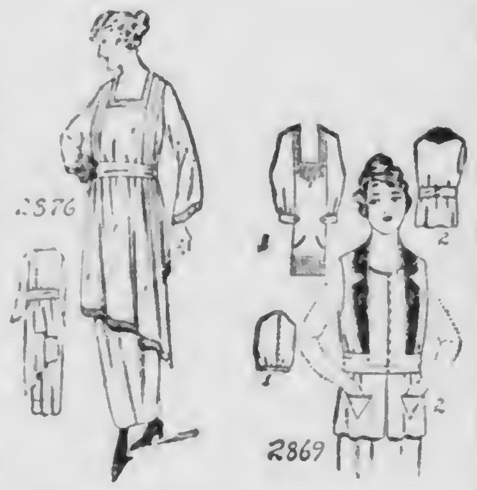
Give figures and letters of each pattern exactly as printed at beginning of each description or we will not be responsible for correct filling of orders. Give bust measure when ordering waist patterns, waist measure for skirt, and age for children's patterns. Address Pennsylvania Farmer, 261 S. Third Street, Philadelphia, Pa.

2691.—Smart For Growing Girl.—The waist is arranged on a lining. The sleeve may be finished in wrist or elbow length. The pattern is cut in 3 sizes: 12, 14 and 16 years. Size 14 will require 4½ yards of 36-inch material. Pattern, 10 cents.



2681.—Up-to-Date For Girl.—The overblouse may be omitted. It is arranged on a plain gathered waist and skirt which could be of contrasting material. The waist portions covered by the blouse may be of lining, if one wishes to economize on the material. Serge, suitings, velvet, corduroy, and all wash fabrics are good for this style. Pattern is cut in 4 sizes: 6, 8, 10 and 12 years. Size 12 will require 3¼ yards of 44-inch material. Pattern, 10 cents.

2876.—Smart Summer Costume.—This design is good for rajah silk or shanting, for pongee, poplin, taffeta, satin, linen or gingham. The blouse is separate from the skirt, which may be of lining under the tunic portion. Pattern is cut in 6 sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. Size 38 requires 6⅝ yards of 36-inch material. Width of skirt at lower edge is about 1⅔ yards. Pattern, 10 cents.



2869.—Guimpe and Sleeveless Jacket.—The guimpe forms a very attractive part of a coat suit. It may be of satin, silk or cloth in contrasting color. The jacket is nice for warm weather wear with a skirt of material to match the collar, or of contrasting cloth, silk, crepe or linen. Pattern for these desirable styles is cut in 4 sizes: Small, 32-34; medium, 36-38; large, 40-42 and extra large, 44-46 inches bust measure. A medium size will require 1⅜ yards of 36-inch material for the guimpe, and 2¼ yards of 36-inch material for the jacket. Pattern costs 10 cents.

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PENNSYLVANIA FARMER
261-63 S. 3rd. St., Phila., Pa.

Markets

PHILADELPHIA PRODUCE

Philadelphia, Pa., July 28, 1919.

The New Jersey potatoes this year are fully two weeks later than was expected, partly caused by the excessive rains of last week and the week previous. It is reported, however, that these rains did not hurt the quality of the potatoes and it is believed that when the movement gets nicely under way nice potatoes will be found. Reports seem to indicate a rather light crop, however, as South Jersey is only reporting about 50 percent of a crop and North Jersey something over 65 percent of a crop. Prices prevailing in this market this week are lower than they were a week ago as No. 1 potatoes are selling from $1-1.15 per ⅝ basket and No. 2's at 50-65c per basket. There were 32 cars of southern potatoes here this morning, but most of them were defective, showing heated condition. Best No. 1's sold at $5.50-6 per barrel, and heated at $4.50-6 per barrel. No. 2's and culls sold from $1.50-2.75 per barrel. A few barrels of southern sweet potatoes have made their appearance and sold around $10 per barrel for the yellow sweets, and $8-9 per barrel for the Yams, with No. 2s at $5 per barrel.

Vegetables

String beans and wax beans are showing an extremely wide range in condition and quality and prices are therefore showing an unusually wide range. Strictly fancy tender young beans are very scarce and sell at $1-1.25 per ⅝ basket, supplies are mostly ordinary and poor, and this class of beans sold today all the way from 10-65c per basket. There has been a decline in the price on beets during the past week and today best bunch beets are selling at 2½-3c per bunch, with poorer ones at 1½-2c per bunch. Carrots remain practically unchanged from last week's quotations, best bunch carrots selling at 2½-3c per bunch and smaller and poorer ones at 1½-2c per bunch. The cabbage market has been in the dumps since our last week's report and prices dropped to 10-25c per ⅝ basket for the New Jersey cabbage at 75c-$1 per barrel for the Pennsylvania grown stock. At the present time there seems to be an improvement and prices are doing better, New Jersey stock now selling at 20-35c per basket and Pennsylvania cabbage at $1.25-1.50 per barrel. Celery is somewhat easier with New Jersey stock selling at 35-65c per bunch and 6-8c for the hearts per bunch, while New York state shows a decline of fully 25c per bunch from last week and sells at 50-75c per bunch.

Strictly fancy corn is in good demand at $1.25-1.60 per ⅝ basket for the sweet corn, with white corn drawing from 65c-$1 per basket, as to quality. New Jersey is now supplying the market very freely with cucumbers and prices are much lower than they were a week ago. Maryland and Delaware cucumbers sold today at 75c per bushel hamper and the New Jerseys from 50c-$1 per ⅝ basket, with the smaller cucumbers or pickles at 75c-$1.50 per basket. Egg plants are also increasing in supply and the extreme prices which have been prevailing are now seeking a more normal level. Today sales of New Jersey egg plants were made at $1.25-2 per ⅝ basket, and the prospects are for a still further decline. There has been a very sharp advance in the lettuce market during the past week, caused by the very light supplies. Today supplies were a little more plentiful, but as the market was practically bare of lettuce, sales were made at $1.50-2.75 per box for New York state lettuce, while the New Jersey lettuce which does not show as good quality as the New York state stock sold at $1.25-2 per box. Lima beans are in light supply and today's offerings brought the very fine price of $4-4.50 per ⅝ basket.

While prices on onions are showing very little change, the tone of the market is rather easy. Sales are being made at this writing at $1.65-1.90 per ⅝ basket for No. 1 New Jersey onions and $1.25-1.40 for No. 2 onions. Some western onions in 100-pound sacks were sold here today at $5-5.50 per sack. White onions are selling at $2.75-3.25 per hamper for the large, while the small boilers and picklers bring the fine price of $4-4.50 per hamper. Parsley is very hard to sell at the present time, and low prices are prevailing, the best hardly bringing over $1 per hamper containing 100 bunches, while some bunches only bring about ½c per bunch. Peas are scarce and bring the high price of $4.50 per bushel when showing good quality. Peppers have become much more plentiful during the past week and prices are very much lower, the best peppers selling today at 40-50c per ⅝ basket, as against $1.25-1.50 for the same grade of peppers a week ago. Rhubarb is a drug on the market and quotations are too slow to be quoted. Squash is getting quite plentiful and moving slowly at 10-25c per ⅝ basket.

Never in our experience have we seen such a wide range in the price on New Jersey tomatoes at this period of the year. Most of the tomatoes are badly out of condition and sell at very low prices, while strictly fancy tomatoes are very scarce and command abnormally high prices. In fact the market is so irregular that it is hard to quote intelligently. Sales of tomatoes were made today all the way from 10c per basket up to $2.50 per basket. Most tomatoes, however, are poor, and few sales exceed $1.50 per basket, most being made within a range of possibly 25c up to $1.50 per ⅝ basket. Turnips are meeting a slow sale at prices ranging from 50-75c per basket for best yellows, down to 25-35c per basket for other grades. Spinach is very scarce and when here sells at high prices. Watercress shows practically no change at 2-3c per bunch.

Fresh Fruits

Nearby New Jersey and Pennsylvania are now supplying this market with practically all the apples that are being used here, but they are showing a wide range in quality and conditions. Strictly fancy hand picked apples are selling at 75c-$1.50 per ⅝ basket, with No. 2s at 40-90c per basket, and windfalls at 10-50c per basket. Only a few southern apples are now coming on the market and these are also showing an extremely wide range, selling today from 35c up to $2.50 per hamper. The Pennsylvania and Delaware peaches are beginning to make their appearance and these with the New Jersey peaches will amply supply this market. Today New Jersey peaches sold at 50-$1.25 per ⅝ basket, while the Delawares sold at $1.50-2 per crate and the Pennsylvanias only brought $1.10-1.25 per crate. These prices are low for peaches but they are the early varieties and are not wanted by the trade, who are getting their wants supplied in fancy peaches from Georgia and North Carolina which sold today at $2-4.50 per crate. As the nearby late varieties appear they will bring better prices than the early varieties are doing.

Blackberries sold today from 15-20c per quart. Huckleberries were rather poor and sold mostly at 15-20c per quart. Raspberries sold at 15c per pint for best, with poorer at 8-10c per pint. The Maryland and Delaware cantaloupes are appearing in increased supply daily and also showing better quality as the season advances. Today these Delaware and Maryland cantaloupes sold from $2-3.25 per crate. Western cantaloupes are still arriving, but the market will soon be amply supplied with the nearby stock. Watermelons are in good demand when fancy. Sales reported today ranged from $125-450 per car, with most sales being made from $250-350 per car.

Poultry

There is very little change in the price on spring chickens over the prices prevailing a week ago, as most of the supplies are still selling at 37-40c per pound for stock not Leghorns. The Leghorn chickens, however, seem to be a little more plentiful and prices have eased off so that they are now selling at 30-35c per pound. Live fowls are a little lower than they were a week ago, as they are now selling at 39-40c per pound. Old roosters have remained steady at unchanged quotations of 24-25c per pound.

Eggs

Under a continued good demand and moderate supplies, strictly fancy eggs are ruling firm and active at full former quotations. The undergrade eggs, however, while they are also quoted at unchanged prices, are inclined to be dull and weak. Sales of Pennsylvania and other nearby firsts are selling at 52c per dozen, with firsts at 50c per dozen. Some markets of strictly fine, well candled and graded eggs are exceeding these quotations. Seconds are bringing from 36-42c per dozen, as to quality. Western eggs are unchanged at 52c for extra firsts with firsts at 50c. Southern eggs all show more or less the defects incidental to hot weather and these sell at the wide range of 36-46c, as to condition and quality.

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LANCASTER PRODUCE MARKET

Lancaster, Pa., July 28, 1919.

Altho apples today were offered in larger quantities than on any other day this season, prices were strongly held at 15 and 18 cents a quarter-peck. Small chickens, dressed, were lower, selling as low as $1.60 each. Berries continued high under a strong and active market.

Butter and Eggs.—Fresh eggs, 48c dozen; country butter, 65-70c lb.; creamery butter, 65c pound.

Poultry.—Dressed old chickens, $1.50-1.75 each; dressed young chickens, 75c-$1.75 each; old live chickens, 28c pound.

Vegetables.—Lettuce, 15-20c head; corn, 35c dozen; beets, 5c bunch; potatoes, 18c per ¼ peck; do., $2.25 bu.; cabbage, 5-8c head; string beans, 8c per ¼ peck; egg plant, 18-20c each; celery, 10-15c stalk; tomatoes, 20c box; cucumbers, 5-10c each; oyster plant, 10c bunch; rhubarb, 5c bunch.

Fruit.—Peach, 15c box; apples, 15-18c per ¼ peck; blackberries, 25c box; huckleberries, 25-28c box; cantaloupe, 15c each; watermelon, 60-70c each.

Grain Market.—Wheat, $2.20 bu.; rye, $1.50 bu.; oats, 80c bu.; ear corn, $1.75 bu.; timothy hay, $37 ton; mixed hay, $35 ton; wheat straw, $15 ton; oat straw, $13 ton.

YORK PRODUCE MARKETS

York, Pa., July 28, 1919.

There has been an unusually large attendance at the markets, both of producers and consumers. Prices ruled fairly high in all lines of produce. Butter is in light supply, also in rather poor condition owing to the unusual weather conditions. Tomatoes are more plentiful and lowering in price. Potatoes are just the reverse. The early crop in the immediate vicinity of York has been dug and indications are for a very light output. The result is that in the past ten days they have advanced from five to ten cents a half peck and are not offered in such abundance as previously.

Eggs.—48-52 cents per dozen.

Butter.—Country, 55-60c lb.; separator, 65-70c. Milk, 10c quart.

Poultry.—Hens, 26-28c lb.; springers, 35-40c lb.; dressed, 75c-$2 each.

Vegetables.—Potatoes, 20-35c ½ pk.; cabbage, 5-12c hd.; lettuce, 2-5c head; beets, 3-5c bunch; radishes, 4-5 bunch; onions, 3-5c bunch; lima beans, 20c pint; soup beans, 10-12c pint; celery, 5-12c; rhubarb, 3-4c bunch; tomatoes, 10-15c box; do., 15-20c ¼ peck; corn, 20-35c per dozen; egg plants, 10-15c each; beans, 15c ¼ peck.

Fruit.—Apples, 10c box, 10-40c ½ peck; blackberries, 16-20c quart; plums, 10-12c box; currants, 15c box; huckleberries, 20-30 cents box.

Retail Grain Market.—Wheat, $2.50; corn, $2.15; oats, $1.01; rye, $1.65; bran, $2.75 cwt.; middlings, $3 cwt.

Wholesale Grain Market.—Wheat, $2.25; corn, $2; oats, 85c; rye, $1.45; bran, $45 per ton; middlings, $56 ton.

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BALTIMORE PRODUCE

Baltimore, Md., July 28, 1919.

Produce.—Potatoes, new, No. 1, $2.50-3.25 cwt.; do., No. 2, $1.50-2. Cabbage, new, $1-2 crate; do., $3-8 per 100. Lettuce, 50c-$1 basket. Onions, nearby, $2.25-2.50 basket. Rhubarb, 2-3c bunch. Cucumbers, 25-50c basket. Carrots, 1-2c bunch. Green beans, 30-50c bu.; do., wax, 75-80c bushel. Lima beans, $2.50-3 bu. Beets, 1-2c bunch. Green corn, 10-25c dozen. Tomatoes, 50c-$1 basket. Squash, 15-35c basket.

Fruit.—Apples, early harvest, $2-3.50 bbl.; 75c-$1.50 bkt. Blackberries, 16-23c qt. Red raspberries, 16-18c pt.; do., black, 25-28c qt. Currants, 75c per 8-lb. basket. Huckleberries, 16-18c quart. Cantaloupes, 50c-$1 crate. Peaches, $2-3.50; $1-2 bu basket. Watermelons, $15-40 per 100.

Butter.—Creamery, western fancy, 55-56; choice, 53-54c; pound prints, 56-58c. Nearby rolls, 45-46c. Dairy prints, 45-46c.

Eggs.—State, Pennsylvania and nearby, 45-46c; Eastern Shore and Virginia, 45-46c. Southern, 44-45c.

Live Poultry.—Springers, 33-36c lb.; old roosters, 22-23c; old hens, 36-37c lb.; ducks, 22-27c; guinea fowls, 50c-$1 each.

Grains.—Wheat, new No. 1 red, $2.38¾; do., No. 2, $2.35¾; do., No. 3, $2.31¾; garlicky, $2.29¾-2.36¾. Corn, bag lots, No. 3, $2.10 bu. Oats, standard, white, 91c; No. 3 white, 90c. Rye, nearby, $1.80.

Hay.—No. 1 timothy, $36-37 ton; do., standard, $34-36.50 ton; Light clover, mixed, $31-33 ton. Clover, mixed, $27-32. Clover clear, $25-27 ton. Tangled rye straw, $11.50-13.50. Wheat straw, $7.50-8.50 ton. Oat straw, $11-12 ton.

Mill Feeds.—Winter wheat bran, $60 ton; brown middlings, $60 ton; white middlings, $70 ton.

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NEW YORK PRODUCE

New York City, July 28, 1919.

Butter firmer; receipts 10,602 packages; creamery, higher than extras, 54½-55c; creamery, extras (92 score), 54c; firsts, 51½-53½c; packing stock current make, No. 2, 45½c.

Eggs.—Higher; receipts, 12,838 cases; fresh gathered extras, 54-55c; do., extra firsts, 51-53c; do., firsts, 48-50c; state, Pennsylvania and nearby western hennery whites, fine to fancy, 67-69c. do., ordinary to prime, 55-66c; do., browns, 56-60c; do., gathered, browns and mixed colors, 52-55c.

Cheese.—Steady; receipts, 1,203 boxes; state, whole milk flats, current make, specials, 32½-33c; do., average run, 31½-32c; state, whole milk, twins, current make, specials, 32-33c; do., average run, 31-32c.

Poutry.—Live lower; broilers, 36-38c; fowls, 35c; old roosters, 23c; turkeys, 25-30c. Dressed steady; broilers, 33-45c chickens, 36-40c; fowls, 33-39c; old roosters, 22-24c; turkeys, 47-49c.

Vegetables.—Potatoes, Jersey No. 1, $5-5.50 bag; No. 2, $3-5 bbl. Beans, green, 50c-$1.50 basket; do., wax, 75c-$1.75 basket. Beets new, $1.50-2.50 per 100 bunches. Carrots, new, $1-2 per 100 bunches. Cabbage, $3-8 per 100. Lettuce, $1-2.25 basket. Tomatoes, Jersey, No. 1, $2-3 box; culls, 20-75c.

Fruit.—Apples, $ 2-2.50 basket. Raspberries, 10-14c qt.; do., black, 10-13c. Peaches, $2-4 crate. Jersey, $1.50-2.25 crate. Cherries, $1-1.75 per 8-lb. basket. Gooseberries, 12-22c quart. Currants, 12-15c quart. Blackberries, 10-20c quart. Huckleberries, 10-18c quart.

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PHILADELPHIA LIVE STOCK

Philadelphia, Pa., July 28, 1919.

Receipts of live stock for week ending July 26 were as follows:

	Beef Cattle	Sheep and Lambs	Hogs
Total for Week	2,793	7,929	4,163
Previous Week	2,359	7,629	5,156

Calves.—Receipts of calves last week were 2,701 head against 2,331 head week previous.

Beef Cattle.—Strictly fine steers were in good request and firm, but the under grades were dull and weak. Calves were slightly easier, but demand was fair at revised figures and values were steadily maintained. Steers, choice, $17.25; do., fair to good, $14-16.50; common to fair, $12-14, cows, fat, per lb., good to choice, corn fed, 10-11½c; fair to good, 8-10c; do., common to fair, 6½-8c; bologna cows, good, fleshy, 5½-6½c; ordinary, 4½-6½c; calves, extra choice, $20-21; fair to good, $18-19; common, $13.50-16.50; heavy, $8.50-10.50; Tennessee, choice, $14.50-16.50; other southern, $8.50-12.50.

Sheep and Lambs.—The market for sheep ruled steady under moderate offerings and a fair demand. Lambs were dull and easier with offerings fairly liberal.

Sheared wethers, extra, $10.75-11.25; good to choice, $9.25-10; medium, $7.50-8.50; common, $4-5; ewes, fat, heavy, $7.50-9; spring lambs, choice, $16.50-17; medium, $14-15; do., culls and common, $11-12.

Hogs.—Demand was active and the general market ruled firm. Offerings were only moderate. Quotations for best westerns, $24.50-25; Pennsylvania and Maryland, $23-23.50.

City Dressed Stock.—There was a fair demand for most descriptions and the general market ruled firm with hogs held higher. Quotations:

Steers, 23-26c; heifers, 19-23c; cows, 17-22c; city dressed, choice, 26-27c; country dressed, 23-25c; sheep, 20-23c; lambs, spring, 28-30c; hogs, 31½c.

PHILADELPHIA HAY AND GRAIN

Philadelphia, Pa., July 28, 1919.

Baled Hay and Straw.—Receipts, 48 tons of hay and 2 cars of straw. Quiet and unchanged. Quotations follow:

Timothy hay, according to location, No. 1, nominal; No. 2, $36-37; No. 3, $32-33. Clover-mixed hay, light mixed, $36-37; lower grades, $31-35.

Straw, No. 1 straight rye, $13.50-14; No. 2 do., $12.50-13; No. 1 tangled rye, $13-13.50; No. 2 $12-12.50; No. 1 wheat straw, $12-12.50; No. 2 do., $11-11.50; No. 1 oat straw, $12-12.50; No. 2 do. $11-11.50.

Bran.—Firm at late advance. We quote car lots, including sacks: Soft winter bran, in 100-lb. sacks, per ton, $48.50-49; spring bran, in 100-lb. sacks, per ton, $47-48.

Wheat.—No. 1 Red Winter, $2.39; No. 2, $2.36. No. 1 garlicky, $2.37; do., No. 2, $2.34.

Corn.—Yellow, in car lots, $2.14-2.15.

Oats.—No. 2 white, 89½-90c; No. 3, 88½-89c.

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NEW YORK HAY AND GRAIN

New York City, July 26, 1919.

Feed.—The market for mill feed was strong at the recent advance and offers from the mills were limited. The demand, however, was light with buyers holding off as far as possible, and the volume of business was small.

Quotations: City feed, bran, $46; middlings, $55, in 100-pound sacks; red dog, $67, nominal, in 100-pound sacks; Western spring bran, $46-47; standard middlings, $56-57; flour middlings, $64; red dog, $68-69.50, all in 100-pound sacks, 30-day shipment. Oat feed, $30; rye middlings, $45; white hominy feed, $76, all in 100-pound sacks. Cottonseed oil meal, nominal; linseed oil meal, nominal, in 100-pound sacks.

Hay and Straw.—Invoices running very light, trade fair and stocks clearing at most harbor points; market is firm and decidedly higher on all grades. Clover and mixed hay somewhat nominal, there being scarcely any demand at this time of year. Rye straw steady. Oat straw selling about $1 per ton higher.

Hay.—No. 1 large bales, $40-41 ton; No. 2, $37-39 ton; No. 3, $31-34; shipping, $27-29 ton. Fancy light clover mixed, $37-39 ton. Clover, No. 1 mixed, $31-33.

Straw.—Per ton, No. 1 rye, $13-14. No. 1 oat, $11-12.

Wheat.—No. 2 red, $2.37½. No. 2 hard winter, $2.37½.

Corn.—No. 2 yellow, $2.11¼. No. 3 yellow, $2.10¼.

Oats.—Standard, 90½c.

Rye.—Export, $1.72.

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PHILADELPHIA DAIRY MARKET

Philadelphia, Pa., July 28, 1919.

Butter.—Receipts, 2,343 tubs. Demand was fair for fine table grades, prices ruling steady under moderate offerings. Much of the supply shows summer defects.

Fresh, solid-packed creamery, extra, 55c; high-scoring goods, 56-58c, the latter for jobbing sales; extra firsts, 54c; firsts, 52-53c; seconds, 49-50c; thirds, 45-48c; sweet creamery, choice and fancy, 57-59c; do., fair to good, 52-56c; ladle-packed, as to quality, 47-48c; packing stock, 43-46c; fancy brands of nearby prints jobbing at 61-63c; good to choice, 55-60c; fair, 51-54c.

Cheese.—Firmly held. We quote: New York and Wisconsin flats, current make, choice, 33¼-33¾c; specials higher; fair to good, 32-33c; jobbing sales of fancy goods, 34¼-35½c.

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NEW YORK MILK MARKET

New York City, July 28, 1919.

Demand was slow early in the week owing to the rainy weather; closed more active. Manufacturers are still kept busy using up the heavy surplus. The rate for August for 3 percent milk in 200 mile zone is $3.13 per 100 lbs.; add 4 cents per 100 for each one-tenth of one percent extra butterfat.

Receipts of milk and cream in 40-quart cans for the week ending July 26, 1919, were as follows:

Railroads	Milk	Cream
Erie	41,542	4,173
Susquehanna	4,528	89
West Shore	16,244	2,372
Lackawanna	61,016	4,110
N. Y. Central (long haul)	143,420	3,738
Ontario	45,715	1,912
Lehigh Valley	52,666	1,770
New Haven	6,928	78
Pennsylvania	12,189	463
Other Sources	6,400	250
Totals	390,654	18,955

CHEESE MARKETS

Cuba, N. Y., July 23.—Salamanca cheese market ruling 82c; Cuba, 82½c.

WOOL MARKETS

The Boston "Commercial Bulletin" of July 26 says: "The demand for wool continues steady and prices, while not materially higher, are tending upward. The mills are showing more interest in the lower grade wools.

"The tone has improved in the London auctions and at the River Plate prices are rising. German demand being more pronounced, altho competition there is general.

"The manufacturing situation is hardly changed, mills being sold about as far as they care to commit themselves."

Ohio and Pennsylvania fleeces.—Delaine washed, 88-90c; Delaine unwashed, 82-85c; fine unwashed, 61-62c; half blood, combing, 73-75c; three-eighths blood combing, 68-70c.

Michigan and New York Fleeces.—Fine unwashed, 59-60c; Delaine unwashed, 78-82c; half-blood unwashed, 70-72c; three-eighths blood unwashed, 67-69c.

Wisconsin, Missouri and average New England—Half-blood, 67-68c; three-eighths blood, 65-67c; fourth-blood, 63-64c.

Virginia, Kentucky and similar—Half-blood unwashed, 75-77c; three-eighths blood unwashed, 70-72c.

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TOBACCO MARKET

As was expected there has been a significant decrease in the acreage of cigar leaf tobacco as grown in Pennsylvania and other states, owing to generally unsatisfactory prices. In Pennsylvania the acreage is estimated at 41,000 acres, as compared with 45,600 acres last year. However, transplanting and growing conditions were never better and the prospective yield per acre is given at 1,438 pounds which is considerable above the average. Market transactions during the week were few. Prices were steady in all instances, the situation being that of a general tendency to higher values. In the Connecticut valley too, the condition of the growing crop is excellent, the dark green condition of fields being a matter of general comment there. The quick growth is said to presage good quality and early maturity, the grade known as primings now being ready to harvest. In Wisconsin, dry weather interfered for a time with the growth of tobacco and new storms and excessive rains have so interfered that the situation is below normal. In Ohio the condition is good altho quite variable, the earlier plantings being well near full grown as compared with later plantings which so far amount to naught. In Wisconsin as elsewhere, much of the 1918 product is yet unsold and the week was characterized by a general effort to purchase this residue. Prices were advanced as compared with recent weeks, sales being at $18-23 per cwt. Many growers believing the outlook as to price to be favorable are refusing to sell at present

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The Voice of the People

This department is reserved for the use of our readers to discuss all problems and matters of general interest. Write your views and comments briefly on any question of social, economic or educational importance and thus share them with others. It will be necessary to limit such articles to 200 or 300 words. Publication of an article in this department does not signify editorial endorsement.

PREJUDICED OPINIONS

If bugs and worms and rodents could talk, I wonder what they would say about the farmer! Probably they would assert that while he may not be absolutely necessary to their existence, he is mighty convenient. They might lambaste him for being "narrow minded" and say that he has no respect for their welfare, and since they far exceed him in numbers, he "has no regard for the greatest good of the greatest number." And since his interests conflict with theirs, any steps he may take for self-preservation they might consistently dub "class legislation"; while at any justice he thus secured they could shout "politics! politics!"

These terms sound familiar, somehow. Editorial writers of some city papers have been busy coining them; First, they could not see why the United States Government should not repudiate the wheat guarantee "because it was only a war measure, and now the war is over"; then when the question arose of repealing the so-called "daylight saving" law, and it was pointed out that it was intended only as a war measure, and if it ever was necessary, that necessity had disappeared, they suddenly discovered that they could not rise early in the morning unless they had a law to force them, and they should not be deprived of this moral stimulus "just because it did not suit the convenience of a class of narrow-minded farmers."

"Somewhere," in a town, midstate in the mountains of grand old Pennsylvania, is published a newspaper whose name implies that if it is not "the salt of the earth", it still is a portion of the earth's constituents. In the main, its policy is one of fairness, but within its editorial fastnesses roams a writer who rejoices or laments (I rather think it is the latter,) in a pen name uniquely picturesque, and suggestive by its sound of the warning note of a highly excited tom turkey. Deponent saith not that he was born on a farm, but, at some time in his career, may have impersonated a summer boarder, and sought solace there.

From his thinly veiled sneers at farmers, and evident distaste for anything purer than a city smell, it would appear that at the time hereinbefore mentioned he had been kicked by a cow, whereby his vanity was injured, and his sense of justice sadly unbalanced, if not utterly destroyed. The first time I noticed his peculiar form of rabies was when the government, without consulting him, having guaranteed the price of wheat to its producers, declined to repudiate that guarantee, and it looked like the farmer was going to get a square deal. Neglecting to call attention to the high cost of everything, including labor, that the farmer must buy, he sheds barrels of crocodile tears over the price of bread, and lifts up his beautiful voice to wail "politics! politics!"

Again, in the issue of June 15th, assisted by the fetid imagination of a fifth-rate cartoonist, he makes a frantic endeavor to find a prop to hold up the stage for the "daylight saving" farce. Treading softly, he makes several indefensible insinuations by which he seeks to prove that the farmers "as a class" are attempting to put over "class legislation," and the "the idea of the greatest good to the greatest number gets no consideration." The law as it now stands is, of course, not class legislation, only a war measure, and may have been some benefit to a "class," for there are many people in the cities, and some in the country who go to bed so late that it takes special legislation to get them up early.

Touching lightly the alleged opposition of farmers to the war garden idea, and with great difficulty suppressing a sob because the farmers are not wildly enthusiastic over the scheme to punish returning soldiers for their valor by condemning them to struggle for existence on abandoned farms, he flaps his wings and cackles. "Can it be that the farmers of the country are seeking to retain present high prices by curtailing production?"

To informed, serious thinking people such arguments are self refuting, or will prove so if carefully investigated, but, unfortunately many readers of a general newspaper do not care what kind of weeds they browse on so long as they possess spice and succulence, and the lack of mental nutrients is not considered, but "the taste lingers" and tends to prejudice the mind against the heavier truth less attractively served.—Wm. A. Libby, Cambria Co., Pa.

I HAVE NOTICED

I read the article in recent issue of Pennsylvania Farmer entitled "Have You Noticed?" Yes, I have noticed that every one in our section of the country is opposed to the present daylight saving law. Why shouldn't we be? The present plan requires the average farmer to arise at three o'clock in order to take care of the dairy and the shipping of milk. Then comes the harvest. When the early showers and the very heavy dews are on the grain it is impossible to get to work until along about nine o'clock. Then there is the one hour off for noon, and then we must quit at five by the proper time, just when the most wheat or hay could be harvested. Also during threshing season; the machine cannot work when the straw is damp. The farmers must lose that time in the morning and quit earlier in the afternoon when conditions are best for the work.

On the other hand, we have noticed that the city people can have that extra hour for a spin in the fresh air and sunshine. I have noticed how these city people are attracted to our fresh berries and vegetables. But we would not have them if we did not work for them. They do not grow without time, labor and season. The farmers' money does not grow on trees.—Mrs. V., Delaware.

If the white straw hats are getting a bit dingy, rub them well with corn meal dampened with peroxide. It will freshen them wonderfully.

How to make an extra profit from farm land

High market prices and quick, cheap transportation which you can control yourself, is a money-making combination for the farmers of this section.

This means more than merely a motor truck. It means the right type and size—a truck of stamina and long life.

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SANDY OF SEVEN

By S. TEN EYCK BOURKE

(Concluded From Last Week)

Reaching up in the din blur of his safety lamp, he felt the thick iron pipe that lay against the wall.

"That carries the compressed air to the far workings," he repeated, going over the plan of the mine he had studied on the map of the Coalville Colliery, all the way over from Pittsburg, until he knew it almost as well as the men who worked there day after day.

Sandy grouped his way thru the smoke and darkness of the mine.

"The men are back there, and I've got to get to them, that's all," he said, as he lunged forward over fallen rock and timbers, always keeping his eye on the dull pink glow that grew redder and redder as he advanced thru the murk of the smoke filled tomb. Joe had been in many burning mines, but each time the same detached impersonal rage against the evil flickering glow seized him, and then he laughed in his hollow helmet to think how he was walking unscatched thru the deadly gas that had beaten him once.

Above and all around him, red and blue and orange tongues licked out at him as he went on; the heat grew fiercer, almost suffocating him in spite of the protection of his oxygen filled helmet; the murk grew so dense the faint glow of his electric safety lamp could not penetrate it. He lowered his head and charged into it like a bull, only to fetch up against a barricade of rock and timber stretched across the tunnel, as if in a last desperate effort the two trapped men had sought to glut the fire with one final outflare.

In an instant he had his bearings. "It's the south drift, where the men are," he told himself, and clambered clumsily to the top of the piled up waste.

Dimly, thru the smoke blurred visor of his helmet, he glimpsed two forms huddled on the far side, one prostrate, as if already overcome with the greedy death of flames and smoke, the other still feebly clutching the drill in which he was tapping steadily on the iron piping. At sight of the helmeted figure ("like the devil himself, I must look to him," Joe thought sardonically) he dropped the drill, struggled to rise and fell back helplessly. Then Joe saw his right leg was doubled under him as he lay at the foot of the barricade.

"He's got nerve," he said, "chap broke his leg when he fell down this nat'ral barrier, and kept his senses in spite of the pain. He deserves to win out."

By the dim blur of his safety lamp he recognized the fireman's uniform, and mechanically he turned to the other prone figure, shifting it to his shoulder.

"Too bad, old man," be membled into his helmet, as if the limp figure sprawling at his feet where the fireman had collapsed in the sheer pain of his last effort. "Regulations it is, but I'll be back for you."

instinct bade him snatch his his helmet and nconscious man he was leaving. On the instant he knew him, and a snarl of rage came to his lips.

"John Hetch!" A red wrath, more blinding than the flames that lay ahead, surged over him. "I'll be back, oh, yes; I'll be back, but it won't be to take you out, John Hetch! You with your lies swearing away what's more to a man that his life. No, sir! I'll be back, to let you know you set your own death trap. I'll come back and laugh at you and leave, like you said I did before——"

Over and over he threshed out his grim scheme of revenue as he fought his way back to the shaft with the man on his shoulder. A very demon of hate and evil surged in him, rejoicing in the revenge that lay ready to his hand. A perfect revenue; a just revenge. John Hetch swore he had done this evil thing, and all his life he, Joe Sanderson, would pay for what he had not done; he'd been paying for months, and he knew what it meant, but after this at least there would be reason for the torment of it all.

First Concrete Freight Car Ever Built. Has Withstood Severe Practical Tests

Still mumbling over the evil he contemplated, seared to the soul with wrath and the desire that was still in him for Sally, he reached the foot of the shaft, and dropped the limp body in the cage.

"I thought I'd forgotten Sally," he said as he reached mechanically for the signal cord. Then the significance of that prone form and the warning of the men above flashed into his mind. His vengeance must wait on duty.

"If the cage sticks this chap can't climb and he won't last long in the smoke. I got to go along to tote him if he needs it. But I'll come back to you, John Hetch!"

Would he, tho? As he leaped into the cage and sent it bumping upward with a quick tug at the cord he reasoned cunningly.

"This man will square me in the eyes of Mine City. They said I couldn't make it at all before I first went down; they'll believe that if I don't go back. If I do, I've got to bring up that carrion, or stay down with him—else I'll stand worse in the eyes of Mine City than I did before even," he figured, forgetting that Mine City did not know the mine rescuer as Sandy of Seven, but as the unrecognized Joseph of Pittsburgh. "Either way, I can't marry Sally—marry Sally—"

He sensed dimly there was something wrong with his reasoning as he stood over the man in the bottom of the cage like a hooded hawk. He was already overtired from his earlier job when he started for Mine City, and now the oxygen in his helmet affected him strangely. His head wasn't working right, and he was losing his lust for revenge. Why? he asked himself, as he staggered from the cage with the help of eager hands, and leaned weakly against the wall of the shaft house, watching while they lifted out the man he had saved.

As he stood there a girl slipped from the excited group and bent over the prostrate man. Then she came close to Joe and peered thru the visor of his helmet. It was Sally, he saw, and he saw that her hands went fluttering to her throat as if she were sobbing. Next instant he had staggered back to the cage.

That was the answer to the question that had confused him. He knew now why he had lost all desire to have Hetch die down in that inferno. It was because Sally had married him, and it would hurt her to have anything happen to him. Joe couldn't hurt her, even to pay off his score with his old enemy.

"Only thing to do is to go get him," he muttered, and shoved aside the men who would have stayed him as if they were flies.

They were slow about lowering the cage, and once when it stopped he put out a booted foot feeling for the ladder. Then the cage dropped again, just as he thought he caught a glimpse of a girl's face peering into the smoke filled shaft. Next instant the wobbly cage struck again, balked and then slid on.

"That must have been a sprung timber head we slid over. Bet she locks again and I have to carry Hetch up those ladders. It's a long climb," he told himself impersonally.

It was pitch black below, and he found he had left his safety lamp up top, but there wasn't time to go after it. Anyway, there was plenty of light ahead, where forked tongues of flame leaped and twisted in fantastic colors and shapes. This time, as he made his way along the level, with the aid of the airpipe, the fire scorched his suit, and he was glad when he stumbled and fell in a muddy pool. It would put out the smoulder. On the far side of the barrier he found Hetch still unconscious.

"Get up," he growled. "Don't you know Sally's waiting for you?"

He shouldered Hetch as he had done the other, but this time he faced the flames that swirled Medusa-like about him with a strange exultation. They rained scorching stars on him as he lurched drunkenly toward the shaft under his burden, just managing to keep ahead of the licking fire damp that had flared out and kept reaching after his heels, like a sentient evil. He made the cage just in time to evade the flames and sent it hurling up the shaft with his furious tugging at the signal cord.

"They know it's desperate, by the way they answered; they'll do their best," he told himself.

But that was none too good, for midway up the shaft the cage stuck and this time refused to budge. But under the spur of the head oxygen Joe was reckless of danger. He flung the fire lieutenant over his shoulder, clasped his wrists around his neck, and gripping them firmly with his left hand, reached out with his right for the crazy ladder.

Smoke and flame roared up the shaft; any moment one of the slippery spokes might snap asunder under the double burden, and he had a hundred feet to climb before he would see daylight, but—

"Sally wants you, John Hetch; she's going to get you!" he repeated and climbed on.

His brain throbbed like a mad thing; his legs were leaden, and the weight on his shoulder was a thing to curse, when he glimpsed a star of light overhead. It grew to a dull glare as strong hands reached out to drag him from the yawning void just as it seemed he must drop back into it.

The first thing Joe sensed after that was that his helmet—the helmet which had suffocated him so long—was off. His head was pillowed against a very comfortable shoulder; tender arms were clasped against him, and Sally's soft cheek was pressed against his. He didn't understand it at all, but he knew he didn't want it to stop.

"Sally," he whispered, "I brought your man back."

Sally's eyes were misty as if she were winking back tears, but she looked happy. "You did, Sandy, at last," she said. "Where have you been all this time, and why did you run away from me when you were in trouble? You didn't think I'd misunderstand like those stupid, foolish men? I can't make Tom and Hetch confess, but I told them I knew they both lied, and I haven't spoke to them since, and I've been trying every way to reach you."

"I've been calling myself Joseph," Joe explained mechanically. Then suddenly his brain cleared. "You say you haven't spoken to Hetch since —since— Why, then you didn't marry him like Tom said you wanted to?"

"Tom said—goose!" she mocked. "Did you think I was going to marry a man I didn't love because the man I did love ran away without me? I'm not married—yet, Sandy."

"You will be soon," Joe announced happily. Then, with apparent irrelevance, "Gee, I'm glad I didn't leave Hetch down below. Poor Hetch—it's worse for him that if I did, Sally."

"You're too good a fighter to be a quitter, Sandy; I always knew that." Sally said. Which showed she was witch wise and understood. Besides she was right. Sandy of Seven was not the kind of man to be a quitter. A fight only tempered the good metal that was in him.

Mary, Jimmie or Joseph

Some Observations in Child Training That May Help Mothers to Better Understanding

School had opened in the district and all thru an exciting day, all varieties of the four-year-old, accompanied by all types of "the mother," were applying for admission.

Mary's mother, of calm, firm, but gentle bearing, stepped forward and the duty of registration properly fulfilled, presented her little daughter. Mary possessed the same calm manner as her mother and in addition a strange childlike dignity and poise of her own. Her two little bright eyes bespoke thought and understanding as she stood there on the alert for every question, at times even assuming the responsibility of the conversation herself. She had been carefully prepared by her mother for this new period of development and so could face it without fear. Therefore, it was no surprise to us to hear her mother say at the conclusion of her visit: "Mary can take off her coat and wait upon her self. She will not cry, for I told her she was coming to school and explained what she would have to do. She is a great help to me at home and I am sure will give you no trouble." Then, turning to Mary, she waved a "goodbye, dear," and Mary, smiling with satisfaction, sat down in her little chair.

We were not allowed to waste much time with Mary just then for suddenly there was a great pushing to the front and hurried childish sounds of "I'm 4 years old, I'm waxinated, I live at 538 East——. My father's name is Jimmy and he's dead and I want to come to school every day! Now can I have a little chair? Can I play with your balls, and make houses with blocks, and sew cards and bring home things every day like all the other boys that go to kindergarten?" When Jimmie stopped to catch his breath, I fully realized that he had made up his mind to come to school, and that, indeed, he was quite ready to do so. When asked where his mother was he said: "She's home, and my big brother he goes upstairs in this school, but I came all alone by myself."

Yes, Jimmie, the youngest of nine, entered school alone, but full of enthusiasm and ambition, with a brain eager for stories and games, and with hands that wanted to work, to learn and to do. Fate had seemed unkind to him, but altho a victim of rough circumstances he had developed fortunately and accidently in the right direction. He turned out to be a most interesting pupil in the class room and soon became an obedient, law-abiding child.

Two big, blue sleepy eyes, mounted in a great wonderful head, supported by the stockiest of frames, there were the striking characteristics of the next little fellow who stood before me. A poor, indulgent mother held his hat in one hand and his apple in the other, together with a penny to give him when he cried and a basket of cakes for fear he might be hungry. As she pushed her son toward me she gave his name as Joseph Carlson.

"Good morning, Joseph. Are you glad you can come to school?" No movement of the eyes or face; no sign of comprehension. "He doesn't like to talk very much," his mother answered. Then his cake fell to the floor and when I asked him to see if he was big enough to pick it up, again it was the mother who replied, "He doesn't ever do anything like that," and she stooped and picked up the cake herself.

Her mission of registration over Mrs. Carlson started to go, but suddenly returned to make these feeble remarks: "You know, teacher, he is 4 years old, but he isn't any good to himself. I have to do everything for him and if I don't he cries. I know I pet him too much, but try him and see if you can teach him something. I can't."

Joseph looked impervious to knowledge, but I had no reason to anticipate that he would prove at all troublesome. "Goodbye, be a good boy," called his mother from the door. For the first time Joseph demonstrated that he possessed some sense of what was going on outside of himself. His screams brought his mother quickly back, and from one penny she raised to two, and finally offered everything she had. But to no avail, for he still continued to stamp and scream. And so I requested her to leave, assuring her that all would be well. With tears in her eyes she said: "Do let me take him home; I think he is very much of a baby." But I was obdurate and refused, for I knew that with every added day of her overindulgence his road would only grow the harder.

Surrounded by new and lively associates of his own age, Joseph soon forgot his mother and himself, and altho he was not very active at first, each succeeding day developed more interest and expression, until finally his mother was able to see a smile on his face when she bade him goodby at the opening of the morning session.

But what labors we had taken upon our hands with her helpless, pitiful pet! How much harder his little battle thru life had been made and how much unhappiness he suffered!

Many a mother thinks the age between 3 and 4 much too early to lay the foundations of self-reliance in her children. She says: "My child is too young to learn yet. When he goes to school he will be taught to do everything and that is time enough." And so she waits upon him day and night, amoses him when he appears silent or lonesome, provides for his every want, and seldom asks him for a response of any kind. In fact, she absorbs his whole personality, impressing her own where his should have a chance to demonstrate itself.

Froebel said: "Our children must learn to do, by doing." Then what happiness, individuality and calm, deliberate deportment even at the early age of 4 they may possess, and what self-controlled, law-abiding citizens they may become if only mothers will try day by day to develop their self-reliance!

How shall this be done? Just teach your child to dress himself, to wash his hands and face, to lace his shoes, to comb his hair, to button his coat, to use his spoon, knife and fork. Commend his initial tugs and struggles and sooner or later those struggles will be converted into finished actions. And hands so trained at home will later in school life grasp scissors more firmly and handle crayon and pencil with a much finer precision.

Fill the child's day with little responsibilities: The care of a garden, of cat or dog, care of toys and care and proper place for clothes. Help him to anticipate your wants, and give him the joy of waiting upon you. Have him run little errands for your scissors, your needles, your thread. Let him care for baby brother or sister once in a while. There will be lots of time besides for play, and a greater value placed upon play time. Such duties to a child are not burdens, but a real delight.—Helen Campbell.

"THE THOROUGHBRED SPORT"

By Edmund Vance Cooke

You've heard of the sport who is reckoned
"Dead game," when he bucks heavy odds?
Well the sport whom I tout isn't second
To the best of your gamest of gods.
He makes your "dead game sport" diminish
'Till he isn't one—two—twenty-three,
So I'm backing my sport to the finish,
Because he's a live sport, you see.

He puts up his coin and his labor—
Without any frivol or fuss;
He bets on his country and neighbor;
He even lays wages on US!
He bets on the state of the weather
For weeks and for months in advance.
So what better sport stands in leather?
Or who takes a narrower chance?

He pledges his future to Mammon
(Which is verse—making bunk for a bank)
And he saves us from annual famine
For hardly a think or a thank.
He has stuck in his trenches for ages;
He's a fighter outside of the fort,
This the world's oldest battle he wages
As he is the world's oldest sport.

On his green baize of acres he gambles,
As he bets on the world and its needs,
He bets against weevil and brambles,
He bets against weather and weeds.
O, he hasn't the tongue of a charmer,
Or the cavalier airs of a court,
And some call him "only a farmer,"
I call him a thoroughbred sport!

Neighborly Talks No. 9

THE HONEST NEIGHBOR

He is the man who "Sweareth to his own hurt, and changeth not." If all men were like him the word dishonesty would become obsolete, as extinct as the great auk and the dodo. He never forgets or repudiates his debts. He does not mortgage the future by purchasing a $2,000 automobile and making a $25 cash payment on it. A favorite motto of his is, "Pay as you go, or don't go."

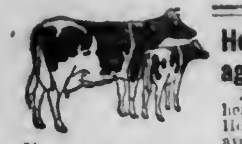
Should he be a fisherman he will be that rara avis, the man whose fish do not increase enormously in size as soon as breath leaves their bodies. He never gives scant measure of potatoes, apples or any of the products of his farm. He may have other failings but no man will ever stand at the bar of Heaven and accuse him of dishonesty.

Your honest neighbor places an honest valuation upon himself—his own powers, gifts, ability, etc. He remembers Paul's injunction, "Let no man think of himself more highly than he ought to think, but soberly," etc. This will keep him from the irritating quality of self conceit. His honesty will also prevent any ridiculously low estimate of his own powers and capabilities. Honesty makes his pillow soft, his sleep sweet, and his morning beautiful. "This is an honest world that my Father builded; all things are built honestly and well, and shall I, the highest type of creation, not be honest also?" he says to himself.

The dishonest man thinks only of how he can feather his own nest now, but the honest man is preparing to be comfortable, not only here and now, but when time has merged into eternity. The honest neighbor is as welcome as the flowers of May, more so—for flowers fade but honesty is unfading.

The honest neighbor will not flatter you to your face and slander you behind your back. When he speaks words of encouragement to us they are honest words, and we value them accordingly. He is no idle flatterer and his words of either praise or blame will be honest words. They may be simple, rugged words, with something of the ruggedness and strength of the hills in them, but they will be luminous with the beauty of honesty and will have weight with his fellows.

Your honest neighbor had rather be honest than to be President. He is an example of the man who has a goal and who makes the goal Honesty with him is not policy, but principle.



Holstein Herd Averages 18,812 Lbs. Milk

Near Big Bay, Mich., is a herd of thirteen pure bred Holsteins. Last year the average yield per cow of this herd was 18,812 lbs. of milk and 638.57 of fat.

Do you realize the money there is in such cows? It is estimated that the average animal yield of all cows in this country is under 4,000 lbs. These thirteen cows produce as much milk as sixty-two cows of the 4,000-lbs. class. It would require 28 cows giving 8,500 lbs. to equal their output.

Why feed, milk and shelter any more cows than you need to produce the milk you require?

If interested in

HOLSTEIN CATTLE

Send for our booklets—they contain much valuable information.

HOLSTEIN-FRIESIAN ASSOCIATION OF AMERICA, Box 218 Brattleboro, Vt.

400 Cortland County Cows For Sale 400

110 Fresh cows. Try a load of these if you want milk.

150 Cows due to calve this month and next. Good size and the best dairy type you ever saw.

70 Registered cows, fresh and due to calve soon.

10 Registered Bulls, with a lot of good breeding.

60 Heifers. They are extra high grades. Mostly due to calve this spring.

CORTLAND HOLSTEIN FARMS
Department OA, 203-205 Savings Bank Building
Bell Phone 534 CORTLAND, N. Y.

HOLSTEINS

30 registered, 30 very high grades due this fall. 50 registered, 50 high grade yearlings. 10 registered, 30 high grade 2-year-olds due this fall. 12 registered bulls ready for service. 10 registered heifer calves, priced to sell at farmers' prices. ⅞ Holstein heifer calves $20 to $25 each, express paid in lots of 5.
J. C. Reagan, Tully, N. Y.

Sons of Rag Apple Korndyke 20th

Beautiful bull calves from cows making 12,000 lbs. milk per year, by this wonderful son of the great Rag Apple Korndyke 8th, who is out of a 32.5 cow. Only $75.
SONDERN & HOURDEQUIN, AVONDALE, PA.

Registered Jersey Bull, two years Aug. 13th. A handsome individual, awake and sure. Farm and herd too small to keep bull over this age. Noble of Oaklands; Cowslip 16th; Marigold and Golden Lad blood, $150 f. o. b. A. W. Rossiter, Phoenixville, Pa.

WE WILL GIVE THE USE OF A
Finely Bred Reg. Holstein Bull Calf
for three years to any responsible farmer who wishes to improve his herd. Mugget Hill Farm, Charlton, Mass.

REGISTERED JERSEYS
A few bred heifers and service bulls.
AUSTIN LEONARD & SON, TROY, PA.

HOLSTEIN Calves 8 Reg. heifers and 2 bulls, from a 30-lb. sire. Write for prices, pictures, and pedigrees.
WALTER M. CRUTTENDEN, Wilkes-Barre, Pa.

Holstein Heifer Calves By pure bred sire and high-grade big producing cows. Beautifully marked. Splendid individuals, $20 up. Browncroft Farms, McGraw, N. Y.

Registered Holstein Friesian Cattle Sons of the great Finderne Sir Valdessa, a 37 lb. bull, for sale.
MILLARD E. BASEHOAR, Littlestown, Pa.

Registered Holstein and Guernsey bulls from calves to serviceable age. 250 animals in the herd.
BONNYMEADS FARMS, R. D. 1, Harrisburg, Pa.

Guernseys— Two males and several females at practical business prices.
MORNINGSIDE FARM, SYLVANIA, PA.

Ayrshire Bull Calves From high record A. R. Dams
ROBERT TEMPLETON & SON, ULSTER, PA.

JERSEY BULL CALF dropped April 2, 1919. Bred right, priced to sell. Write at once.
THE MAPLE DALE FARM, R. 6, Freeport, Ohio.

Polled Holsteins registered with the horned ones, only naturally hornless. Catalogue for stamp. GEORGE E. STEVENSON & SONS, Clarks Summit, Pa.

Milking Shorthorns Bull Calves sired by Glenside Royal Stamp for sale.
C. M. KENNEDY & SONS, Ulster, Bradford Co., Pa.

Miscellaneous

Stallion For Sale

or exchange for mare colts or Holstein heifers. The 12-year-old Clydesdale stallion Laird of Boquhan, imported by the New Jersey Livestock Commission and pronounced by them to be the best draft stallion in the state. Price $300. Gentle and a sure foal getter.
Joseph W. Ridgway, Salem, N. J. R. F. D. No. 3

PENNS VALLEY STOCK FARM
Percherons, Berkshires, Holsteins
Sows and gilts bred for September farrow.
W. F. RISHEL, CENTRE HALL, PA.

Ayrshires, Percherons and Berkshires
We have what you want.
CRESMONT FARM, SUNBURY, PA.

Near-By Stock Farm Offers Reg. Ayrshire cattle; Reg. Berkshire pigs, all ages; White Wyandottes, all the most popular blood lines. J. A. McMAHAN, Pottsgrove, Pa.

Chester White Hogs, All Ages
Shorthorn Bulls. R. L. MUNCE, Canonsburg, Pa.

SHROPSHIRE AND SOUTHDOWN RAMS of the [illegible] at reasonable prices. Correspondence in[illegible] Chatham, N. Y.

Veterinary

Conducted by W. C. Fair, V. S.

Advice thru this department is free to our subscribers. Each communication should state history and symptoms of the case in full; also the name and address of writer. Initials only will be published. We cannot make reply by mail. This is one of the most valuable columns of the paper and we invite readers to make use of it. Clippings from this column, when properly preserved and classified, make one of the most valuable medical symposiums a farmer-stockman can obtain.

Bog Spavin.—A short time ago I purchased a mare which is lame, result of bog spavin. Can she be cured without taking the hair off hock joint? Have greased the bunch, but it failed to help her. C. T. H., Duncannon, Pa.—Apply equal parts tincture iodine and camphorated oil once daily. If you can give her rest clip off hair and apply one part red iodide mercury and one part powdered cantharides and eight parts fresh lard. This ointment will of course blister but there is no danger of leaving a scar.

Brittle Hoofs.—One of my horses is troubled with brittle hoofs. Commencing about two weeks after he is shod the hoof chips off. The wall is dry and mealy like, besides the frog and bottom of foot has a foul odor. When bottom of foot is scraped it crumbles. H. P. J., Halifax, Pa.—If your horse's ailment has lasted for any great length of time it will now be incurable. However, if you will keep the hoofs moist by standing him in wet clay, two or three hours daily, and apply lanolin once a day, you will get some improvement. If pus comes from frog, apply equal parts calomel and boric acid, once a day. This horse is unfit to do road driving, but doing slow work on farm will do him no harm.

Stringhalt.—Short-Winded.— One of our mules, which is about 12 years old, seems to have trouble in left hind leg. He does not rest full weight of quarter on this leg. When first led out of stall he jerks up foot. This ailment dates back not less than 12 months. We also have an eight-year-old draft mare that seems to be growing short of breath. Let me know cause and remedy. J. H., Nottingham, Pa.—Your mule has what is known as stringhalt. Chronic stringhalt is usually incurable, medical remedies have only slight palliating effect, which of course is not permanent. The right kind of surgical work, which consists in the removal of a section of the peroneal tendon, will sometimes prevent the jerking up of leg. This is work which should be done by a skillful veterinarian. You fail to give enough symptoms regarding your 8-year-old, short-winded horse; however I imagine she either has throat or lung trouble, perhaps throat. Rub throat with camphorated oil, twice a day, and feed less bulky food.

Garget.—Cow came fresh last April and recently went dry in one quarter. I imagine a second quarter is now diseased. There seems to be a stricture condition of teat, preventing milk flow. Can she be made all right? D. F. R.—Give your cow 30 grains potassium iodide and a tablespoonful cooking soda in either feed or in drinking water, twice a day. Hand rub diseased portion of udder twice daily. Her recovery is doubtful.

Calves Cough. — We have two calves, nine-weeks-old, which have been coughing more or less since they were two weeks old. They run in pasture day time and are stabled nights. Have noticed they do most of their coughing when eating. D. M. K., Buffalo Mills, Pa.—Apply one part tincture iodine and two parts camphorated oil to throat, once a day. Dissolve a teaspoonful salt in one pint water and gargle throat, twice a day, using ½ part for each calf.

Indigestion. — Caked Udder. — I have a cow that has rather poor appetite, breath is offensive and her udder occasionally cakes. She is weak. H. C., Newfield, N. J.—Give her ½ pound epsom salts in one quart of water as a drench—one dose only. Give her one ounce tincture gentian and one ounce tincture cinchona at dose, three times a day, in one quart of water as a drench. Feed her the kind of food she craves. Keep her bowels open.

Abscess on Udder.—My Holstein heifer came fresh four week ago, a bunch formed on back part of udder and opened. Some of my other cows have had similar udder trouble, but they recovered. W. S. J., Rome, N. Y.—Paint edges of opening with tincture of iodine and swab out abscess with the same three times a week. Give her a teaspoonful hyposulphite soda at dose in feed or in drinking water once a day.

COUNTY NOTES

Montgomery, Pa., (SE) July 14.—A number of farmers report that their rye crops are not up to the average yield this year. An open meeting was held by the Worcester Grange, and a feature was moving pictures illustrating the lumber trade. George Delp is one of our first truckers to sell sugar corn this season. Corn is bringing $2 to $2.05; oats, 75 to 81c; wheat, $2.29; baled hay, $33 to $40; hogs, $18 to $22.50; fat cows, $10 to $12; steers, $13 to $16; eggs, 50 to 57c; butter, 60c. The large barn on the J. S. Connelly farm, near Norristown, was destroyed by fire. Two calves, a lot of hay and grain, a bull, and valuable machinery was destroyed. The fire was caused by the spontaneous combustion of the harvested crops. A worthy movement is started to dissolve the toll road between Kulpsville and Green Lane.—H. M. East, Jr.

Center Co., Pa., (C) July 21.—The large hay crop was stored mostly without rain. Wheat is all cut and most of it is hauled in. The last week or ten days have been showery and what grain is still in shock is sprouting. If the weather does not clear up the loss in sprouted wheat will be considerable. Much of the wheat was lodged and it was not possible to shock it well. The 60-day oats are about ready to cut. Oats generally are short in the straw but seem to be filled well. Most of the corn could not look more promising. Potatoes are doing fine since the late rains. The latter part of June and the first week in July were very hot and dry, but since then we have had ideal growing weather and the young grass, corn and potatoes are making up for lost time. Labor is scarce and practically all crops are being gathered by the farmers alone. All kinds of fruit is scarce while berries are about a normal crop.—S. H. Shafer.

Caroline Co., Md., (E) July 21.—Farmers in this section are making good use of the good roads. Farmers are conveying their produce over the state road running direct from Ocean City, Md., to Wilmington, Del., sending most of the stuff to Annapolis. There is a steady demand for all fruits and vegetables and prices are good The rainy weather the past week did much damage to wheat that is still in the field. The wheat in this locality did not turn out as well as normally. The largest yield so far has been around 22 bushels per acre; while some have averaged only about 10 bushels. The tomato crop is suffering some from blight, caused by the wet weather. Potatoes are selling at $5.50 per barrel. Vegetables and fruits are selling high. A few cantaloupes are being marketed now and bringing $6 per crate. Peaches are high and scarce, due mostly to brown rot. Any kind of apples will bring 50 cents per ⅝ basket. Wheat, $2.30 bu.; corn, $2.12 bu.; eggs, 44 cents; butter, 50 cents; young chickens, 40 cents lb.; hens, 37 cents lb. Young pigs are scarce and selling at $15 per pair. Beef cattle are scarce and high.—L. T. Blades.

Snyder Co., Pa., (C) July 19.—We have been having nice weather during the past week, with occasional terrific thunder storms doing great damage to crops, building and stock. Farmers are about done cutting wheat most all the wheat is stored away. Some hay to make. Oats will be ready to cut in a week or 10 days. Corn crop will be a heavy one in this county. Wheat, $2.30 bu.; oats, 65c.; corn, $1.60; eggs, 40c doz.; butter, 46c lb.; lard, 30c lb.; chickens, 24c lb.; chop, $3.40 cwt.; flour, $12.60 bbl.—S. D. D.

Carbon Co., Pa., (EC) July 21.—Farmers in this section are busy at present with the wheat and rye. Most of the fields are cut and standing in the shock. It has been raining almost every day for a week, interfering with the work in the fields. Wheat is an excellent crop and rye is up to the average. No fly reported here. Haying is almost all done and a very good crop in this county. Timothy was very rank and stood very thick. The price of new hay delivered to the nearby mining towns is $35. Most of it is used by foreigners who keep their own cows. Oats bids fair to be a bumper crop altho some has lodged with the recent heavy rains. Corn grew remarkably well during the hot dry weather of a few weeks ago. Many potato bugs here this season but the dry dusting made short work of them. Potato vines look very healthy and no blight as yet. New potatoes $7 a barrel wholesale. Two tractors are being used in this township with good results. Two new 1 and ½ ton trucks were purchased by farmers recently. Some new machinery being bought at high prices. Outlook on the whole very good for farmers this season.—Walter S. Bittner.

Pinehurst Shropshires

Registered Flock established twenty-five years. Bred for TYPE, MUTTON FORM AND HEAVY FLEECES. Great prize winners. 1919 catalogue, price, breeding and description ready. Make choice early. There is big demand rams this year. In August will offer 25 select yearling ewes, 40 ewe lambs and 50 imported ewes.

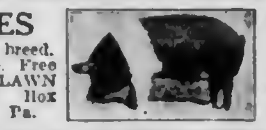
HENRY L. WARDWELL
Dan Taylor, Shepherd. Box Z, Springfield Centre, N. Y.
OUR MOTTO—"Like Begets Like."

Swine

LARGE YORKSHIRES FOR SALE
Only 3 six months boars and some Spring pigs for sale. If you want any write at once.
STAR RIDGE FARM, BREWSTER, N. Y.

CRANDELL'S BIG TYPE O. I. C.'S
The World's Grand Champion herd, winning twice as many first prizes at the National O. I. C. Show as all other breeders put together. Calloway Edd being the Grand Champion boar. Also our herd has been undefeated at all the big fairs for the past two years. Stock of all ages for sale. Get our catalog. Crandell's Prize Hogs, Cass City, Mich.

Fashion Herd of Big Type Poland Chinas Spring boars sired by Giant Smooth Wonder and Ohio King 2nd, out of 700 and 800 lb. sows, real herd-header prospects. A few sows bred for fall farrow. These offerings are real ones, the kind that are worth while. C. S. EPPLEY, ZANESVILLE, O.



HAMPSHIRES
The fast growing bacon breed. Stock any age for sale. Free circular. LOCUST LAWN FARM, Bird-in-Hand, Box 2, Lancaster County, Pa.

Duroc JERSEY SPRING PIGS and gilts, bred for July and Sept. farrow. Grand Champion blood lines. Geo. W. Cram, Plainsville, O.

DUROC PIGS. The large type, with quality. Spring boars and bred gilts. Prices reasonable. JOHN W. COX & SONS, NEW WILMINGTON, PA.

REGISTERED O. I. C. Herd Boar for sale, sure breeder. Also booking orders for Aug. and Sept. Pigs. BENJ. H. RUTLEDGE, Honesdale, Pa. R. 3.

Reg. O. I. C. and C. W. Pigs. Bred gilts and sows Satisfaction and safe delivery guaranteed.
JOHN L. VAN HORN, TROY, PA.

REG. BERKSHIRE PIGS for sale, Aug. Sept. and October prices right. 4 gilts open; nice ones 100 to 140 pounds. W. J. McCONNELL, OXFORD, PA.

REG. O. I. C.'S all ages. Booking orders for June pigs; Gilts bred for August farrow. BLACK DIAMOND MINORCA FARM, Mt. Bethel, Pa.

Chester Whites Choice Registered spring pigs, a few older. Write your wants.
J. A. BOAK, New Castle, Pa. R. F. D. 4.

Large Berkshire Swine Registered High Grade. Prices reasonable. Write
HOME FARM, CENTER VALLEY, Pa.

Chester Whites Boar and Sow Pigs. Bred Sows. Collie dogs.
ARCADIA FARM, BOX D, BALLY, PA.

Durocs, all Im. Yearling and Fall yearling boar and Fall boars. Fall gilts, bred for Aug., Sept. and Oct. Spring pigs, e. sex. I. D. Jackson, R. 10, V. Wert, O.

Duroc-Jersey spring pigs at farmers' prices. Pedigreed and best of blood lines.
SLATY RIDGE FARM, Box 5, Palmyra, Pa.

O. I. C. Pigs 2 and 3 mo. old, heavy bone, short nose. Reg. free.
BRUBAKER BROS., Star R., Cocolamus, Pa.

Poultry

HUMMER'S FAMOUS CHICKS
famous because they live and grow. Special prices June, July and August.

	Per 100	Per 50
Bar Rock, big healthy fellows	$15.75	$8.00
R. I. Reds, Blue Ribbon stock	17.00	8.75
Ancona	20.00	10.50
Brown Leghorn S. C. Everlay strain	16.00	8.50
White Leghorn	14.00	7.75

We solicit your business on a square deal basis, live arrival, parcel post paid.
E. R. HUMMER & CO., Frenchtown, N. J., R. D. Y.

Ship Your Live Poultry and Eggs to a Reliable Firm
We get the best price for you and guarantee prompt returns. Ask the publishers of this paper or your banker as to our Financial Responsibility. Write for prices at once.
J. K. SCHULTZ & CO., Commission Merchants,
36 S. Water Street, Philadelphia, Pa.

LOOK BABY CHICKS $12 A 100 UP
By Special Delivery Parcel Post, postage paid 20 different thorobred breeds. Utility & Exhibition grades Live delivery guaranteed. Capacity 100,000 weekly. Catalog free. NABOB HATCHERIES, Gambier, Ohio

Chicks, Cockerels, Pullets, Drakes AND DUCKS. Wyandottes and Plymouth Rocks, Pekin, Rouen and Indian Runner Ducks. ALDHAM POULTRY FARM, R 39, Phoenixville, Pa.

Selby Service Satisfies Ship us your produce, poultry and eggs. Penna. Potatoes a specialty. Returns day goods are sold. Ask for our market letter.
SELBY PRODUCE CO., PHILADELPHIA

200 White Leghorn Hens, Barron Strain
$1.75 each. Cockerels 5 months old $1 each.
I. R. TANGER, YORK SPRINGS, PA

Bred to Lay S. C. WHITE LEGHORNS. Don't buy an egg or chick before you get our free catalog. SLATY RIDGE POULTRY FARM, Box 5, PALMYRA, PA.

Baby Chicks For Sale July and August. Barred Rocks, R. I. Reds, & Leghorns. Buckeye Hatchery, Millerstown, Pa.

S. C. WHITE LEGHORN 2 yr. old hens; some fine early cockerels cheap. Tom Barron strain.
C. P. SHIREY, STEWARTSTOWN, PA.

SWING BACK PADS FOR SORE NECKS

Have any of the readers of Pennsylvania Farmer tried the oscillating or swing back pads for sore necks on horses? I find that they are far superior to the zinc pads and will soon remedy a case of sore neck. They consist of a stiff piece of leather with a large hole in the center surmounted by a steel spring. Some springs are made with holes in and some are not. The principle of the outfit is to keep the necks cool.—Elbert C. Mock, Bedford Co., Pa.

PREMIUM LIST NATIONAL DAIRY SHOW

Premium lists for the National Dairy Show to be held at Chicago, October 6 to 12 inclusive, are now ready for mailing. Address National Dairy Association, 910 So. Michigan Avenue, Chicago. The lists give full classification of animals, rules and regulations of entering and showing animals, rules of exhibitors, judges, premiums, days of judging and all such other information as exhibitors of cattle will want to have.

An advertising man who has just returned from a vacation spent at the Delaware Water Gap vouches for the truth of this story: Accompanied by his wife and several other ladies, he was out driving one day, and away off in the country encountered a small boy who was selling lemonade by the roadside. The boy had two pails, each about half full. "We were all thirsty," said the advertising man in telling the story yesterday, so I pulled up the horses. 'How much is your lemonade?' I asked. 'This is 5 cents a glass,' said the boy, indicating one pail, 'and this is 3 cents,' he added, pointing to the other. My curiosity was aroused. 'Why do you sell one for 5 cents and the other for 3?' I asked. 'Isn't the 3-cent lemonade as good as the other?' 'Oh yes sir; it's just as good,' he said, wriggling his bare toes in the dust; 'but the pup fell into that pail!' "

Some persons wonder why their umbrella stays always break loose at the tip, or ferrule. No need to wonder; it's because they stand their rainy day companion up in a corner to dry and the water runs down and rusts out the joints.

George Ade says: Good roads cost money, but show me a community which has invested in hard roads such as can be used at all times of the year, and which now would be willing to go back to the mud-holes for a cash consideration.

Vermin-infested hens mean a scant egg basket. The energy that goes into lice never make eggs. The N. Y. State College at Ithaca, N. Y., will send you for the asking a copy of Circular 29 on "Poultry Parasites."

Milk alone will sustain life indefinitely, which is true of no other one food.

MOLINE
System of Power Farming

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Thousands of Moline Power Farmers in all parts of the country are making more money with less hard work. They are getting more profit and enjoyment from farming, and you can do the same by using the Moline System of Power Farming.

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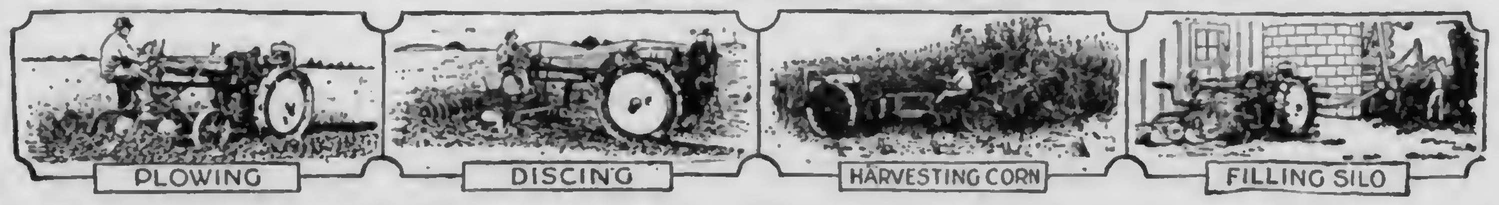

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Volume 46 PHILADELPHIA, PA., SATURDAY, AUGUST 9, 1919. Number 6

Every Bump a Collision!
HASSLER SHOCK ABSORBER, PATENTED
CONICAL SPRING AT THIS ANGLE PREVENTS SIDESWAY
STOP ON LEVER PREVENTS UP-THROW
SOFT AND RESILIENT ACTION DOWNWARD
TRADE MARK
HASSLERS for all Ford Passenger Cars
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TRADE MARK REGISTERED
Shock Absorbers
PATENTED
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Every Bump is a Little Collision in Itself

COMBINE the bumps your Ford is compelled to withstand in a year, or even six months, and you would have a collision that would tear it to pieces.

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Hasslers are proving their worth on more than a million Ford Cars today. Look and you will see that one in every three Fords is now equipped with the Patented Hassler Shock Absorber. And while the saving is remarkable, yet a large percentage of Hassler owners purchased them because of their easy riding qualities. Any Hassler owner will tell you that the additional comfort alone is worth more than the cost of Hasslers.

We might also mention that gasoline mileage is increased; that steering is made easier, adding to the safety of the car; and that greater speed is made possible, giving more practical value to the car.

Hassler Shock Absorbers can be applied in a few minutes. They do not require marring of the Ford. There are two types; one for the Ford Passenger Car and another for the Ford One-Ton Truck.

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PENNSYLVANIA FARMER
AGRICULTURE THE KEYSTONE OF NATIONAL PROSPERITY
ESTABLISHED 1880
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FARMERS' MOTOR TRUCK LINE

How Harford County, Md., Farmers Have Solved Their Local Transportation Troubles

By H. S. YOHE

U. S. DEPT. OF AGRICULTURE

If one were to start by auto on a pleasure trip from Baltimore to Philadelphia early in the morning of any day of the week except Sunday, somewhere between Churchville and Bel Air, Maryland, about seven o'clock he would see approaching him a large auto truck with covered body. As he drew nearer he might observe the truck drawing toward the side of the road and stopping. Passing by the truck he would note on the side of the body "The Farmers' Co-operative Company of Harford County, Inc.," while at the rear end of the truck two men would be putting on milk and other farm products.

The thoughtful observer, as he passes one dairy farm after another, would naturally ask himself what is this Farmers' Co-operative Company? Whom does it serve? Do the farmers themselves own it, or has some private individual seized on the name simply to beguile the farmers? How is it financed and managed? What, if anything, has it accomplished for its members? These and many other questions will gallop across the mind of the autoist if he has been thinking about rural community problems, and especially problems of marketing.

What is The Farmers' Co-operative Company of Harford County? It is an organization of farmers and rural merchants who associated themselves to improve their transportation facilities. The farmers had milk, poultry, eggs and garden crops to market in Baltimore, which was from 20 to 27 miles distant, and in turn they drew on Baltimore for farm implements, stock feeds, fertilizers and machinery, while the rural merchants obtained meats, groceries, hardware and dry goods from the same city.

These Trucks Are Operated by a Farmers' Co-Operative Company

One naturally inquires what means of transportation was available to these farmers and merchants prior to forming their association. About two years ago, when it came into being, the section was served by one railroad and a private individual ran a daily auto truck service between Bel Air and Baltimore. What need was there then for the association? Perhaps 75 percent of the farmers in the community shipped milk daily to Baltimore. Many of these farmers lived from two to five miles from the railroad shipping point. It was necessary for them to make daily trips to the railroad. This usually meant the time of a horse and man from two to four hours. Besides, the farmers were obliged to keep a large number of milk cans, due to the fact that the railroad did not make returns the same day. In addition, cans were frequently lost. The private owner who operated the private motor truck service gave satisfactory service for a time but when he indicated that he intended to increase rates a few of his leading patrons decided if it was profitable for a private individual who had nothing to ship to operate a motor truck it ought to be profitable for them to associate themselves and purchase a truck to transport their own products.

Before finally determining to embark upon their venture the persons principally interested wisely decided to make a canvas of all farmers and merchants who might be interested, with a view to learning the general sentiment toward association as well as the amount of goods each might have to be transported. The survey seemed to indicate that sentiment favored an association and that there would be sufficient tonnage to insure the success of the movement, provided sound management could be had.

Forming the Organization

The next step was to effect a legal organization which would clearly define the rights and legal liabilities of each member. Many farmers welcomed the idea of an association which would aim to serve the farmers and keep profits with them, but they feared the legal liability that might attach. Fortunately for the movement, the prime promoter was a farmer-lawyer who commanded the confidence of all. He developed a plan of organization and impressed upon them that no person would be liable in the event of failure for a greater amount than that which he expressed a willingness to assume. It was explained that the association would be incorporated under the state law. This would protect each member.

Farmers Bringing Their Milk to Their Co-Operative Truck Route

A Return Load of Assorted Articles

Application was made to the proper official for a charter. In applying for the charter the promoters felt that if a liberal charter were secured, the association could without amending its charter extend its activities to cover a wider field than that of transportation, if at any time other fields should appear inviting. The charter secured permits members to buy, sell, transport and deal in farm products and goods to deal in all machinery, tools, implements, etc., used in connection with the business carried on by the corporation, to acquire or dispose of property, necessary for the carrying on of the businesses; to acquire the assets of every kind of any corporation carrying on any business, that the corporation may be authorized to carry on; to carry on other business (whether manufacturing or otherwise) which may seem to the corporation to be calculated directly or indirectly to enhance the value of its property and rights.

Financing the Company

When mention is made of incorporation the average farmer gets the impression that a great many persons and much capital are involved, and that the proceedings are expensive. The cost of forming The Farmers' Co-operative Company of Harford County did not exceed $35. There were only about 15 members when the association commenced operations. Since the first motor truck purchased cost about $3,000, the cost per member was not exorbitant. However, to make it possible for persons who could not invest much money, and yet who might have a large tonnage to offer, it was provided that the par value of stock should be fixed at $25 and that the ownership of one share of stock should entitle to membership.

When the association first started, it realized but $1,200 from stock subscriptions. After applying this to the purchase of the truck, $1,800 remained to be paid. Several of the members had such implicit confidence in the outcome of the venture that they gave their personal notes to a bank as securly for notes issued in the name of the association, to take care of the balance due on the truck. Twelve notes of $150 each, one falling due each month, were issued. The operations of the association were so successful that they paid off the notes some time before maturity.

Delivering a Harrow Ordered by Phone. Milk to Be Loaded for Baltimore

The association was capitalized at $5,000, there being 200 shares of stock at $25 each. Ownership of at least one share of stock is essential. To prevent one or two members from gaining control, no member is permitted to own more than 20 shares. The management is in a Board of Directors chosen by the stockholders from among their own number. The Directors in turn elect a President, Vice-President, and Secretary-Treasurer. The last mentioned official is the principal administrative officer and carries out the policies formulated by the Board of Directors. To insure against inefficient management, provision has been made for the removal of any official or member of the Board of Directors upon formal complaint filed by any stockholder. On the other hand to protect officials against charges grounded on personal ill feeling and animus, a copy of the charges must be given to the official against whom they are directed and he is entitled to a hearing at a regular meeting of the Directors. A majority vote of members is required to expel.

The Directors meet twice a month. To keep the stockholders in close touch with the Directors they are invited to attend all meetings of Directors. Suggestions for improvement are always in order. The association is a non-profit institution. It aims to operate on a cost basis, plus the accumulation of sufficient reserves to replace wornout equipment and meet overhead expenses. It positively refuses to do business for anyone except its members. By confining its service to members only, it is classed by the Maryland Public Service Commission as a private individual and not as a common carrier. This gives it the advantage of a decidedly lower license fee and in addition it is free of other restrictions.

Profits go to the members indirectly in the form of low rates, a charge of 15 cents per hundredweight being made on goods classified as first class for carrying from either Churchville or Bel Air to Baltimore. On second class goods the rate is 12 cents per hundredweight. Under first class goods come fruits and vegetables, meats, groceries, etc. Second class goods include heavier and less bulky articles, such as hardware. The rate on milk is 2½ cents per gallon. A charge of 4 cents per gallon is made on cream if the shipper wishes to be reimbursed on a basis of market price of cream in case of loss. If the shipper is willing to assume the risk and accept as payment the market price of milk, cream is hauled at the same rate as milk. All goods lost or destroyed are paid for by the association. Bearing in mind that the distance from Churchville to Baltimore is 27 miles, and from Bel Air is about 23, it will be seen that the rates are quite reasonable as compared with the rates charged by the average motor truck route.

Selecting the Truck

It would serve no useful purpose to give details in connection with determination of type of truck to be used, except that the directors appointed from among their own number a committee to investigate the merits of various makes. From the experience of the association they have concluded that the following factors should be seriously considered before actually purchasing a truck.

1. A thoro survey to determine the present and prospective business moving in both directions thruout the year.

2. The capacity of the truck should be somewhat in excess of present needs.

3. If the tonnage is available for full-capacity loads, it is cheaper per ton-mile to operate a 4 or 5-ton truck than a 2-ton truck.

4. Study carefully the leading types of trucks and consider only trucks of proved merit.

5. Be guided not solely by first cost, but secure figures on cost of operation and upkeep from operators of the various trucks under consideration. The truck of highest initial cost may be the cheapest in the end.

6. Do not buy from an agent simply because he is a member of the community and will give the association his trade.

7. Sufficient funds should be raised to pay cash for trucks. This is highly desirable.

Benefits From the Association

The farmer like any other person when approached to take part in a movement wishes to know what benefit will accrue to him. Because so many associations, co-operative in name only, which the farmers had been induced to join, had failed or had had rather checkered careers, many farmers in this community were a little suspicious of the venture. It did not take many months operation, however, until the benefits became quite apparent to all. To the farmer living on the highway traveled daily by the truck, it was quite a convenience to place his milk or produce at his farm gate and have the truck pick it up and deliver it in Baltimore instead of being obliged to haul it from one to five miles to the railroad station. For the convenience of those whose farms were a mile or so distant from the highway, loading platforms were erected at convenient intervals along the highway. It was only necessary for them to haul from their farms to the highway. This in itself made available to the farmer a team and man for several hours more work each day. While the truck operated by the private individual extended similar facilities, the rates charged by the association were considerably less.

The association had not been operating long when the idea occurred that it might act not only as a transportation agency for its members but it might act as a purchasing agent since the needs of members were quite similar and wholesale dealers in Baltimore had indicated a willingness to give the association the benefit of wholesale prices if large enough quantities were purchased. It was at once apparent that dairy feeds, salt, fertilizers, implements and seeds might be bought thru the association. During the past year over 100 tons of oyster shell limestone and tons of other fertilizers were bought in this manner. Each month tons of feedstuffs and salt are bought for members engaged in dairying. The saving to members by this means of collective purchasing is shown in the case of one member who made enough on his seed purchases during last year to pay for his company stock. Another member who owned several shares of stock saved enough in the purchase of an ensilage cutter and gasoline engine to pay for his stock. Farmers who own but one share in many instances have saved enough thru reduced rates to pay for their stock, to say nothing of the more convenient service.

The benefits which this association was conferring on those who were among the first members were so apparent that applications for membership came in so rapidly that before the association had been in operation a year its 4-ton truck was too small. This was supplemented by a 2-ton truck. This in turn was soon replaced by a 5-ton truck. The association has been so successful that it has attracted the attention of farmers all over the country. Recently, after a thoro investigation among its members, farmers in another section of the country were so impressed that they formed an association on exactly the same lines.

HITCHING WAGON TO AUTO

The matter of making a good hitch for a trailer to an automobile is not so hard if you have a regular trailer and a hitch made for that use only. But when we come to hitch a farm wagon behind the farm machine to haul a cow or a few hogs it must be done quickly and securely.

Some days ago I saw a farmer drive a good sized machine up to a neighbor's sale with a farm wagon and a grain box on. He was taking a cow home. I wondered how he had hitched the wagon and was surprised to find that it was by the use of a double-tree and a rope and a little wire that he had done it.

With the exception of one or two lighter machines the rear springs extend to the rear of the axle of the machine and then form some sort of a loop back to the box or body. The single-trees were taken off the double tree and this was set in the two loops and fastened thru the holes of the single-tree pins. The tongue was fastened thru the hole in the center of the double-tree where the clevis pin usually goes and a few strands of that tough baling wire was used for this purpose. For the temporary hitch and a solid one, this seems to fill the bill.—Earl Rogers.

KILLING ELDER BUSHES

The banks of the open ditches on our farm are infested with what we call elderberry bushes. I want clean fields and ditches and want to get rid of these bushes. I have been told that mowing them the last half of August is the proper treatment; that the sap of the bush is in the top at that season and the roots are more easily killed at that time.—B. F. T., Aurora, N. Y.

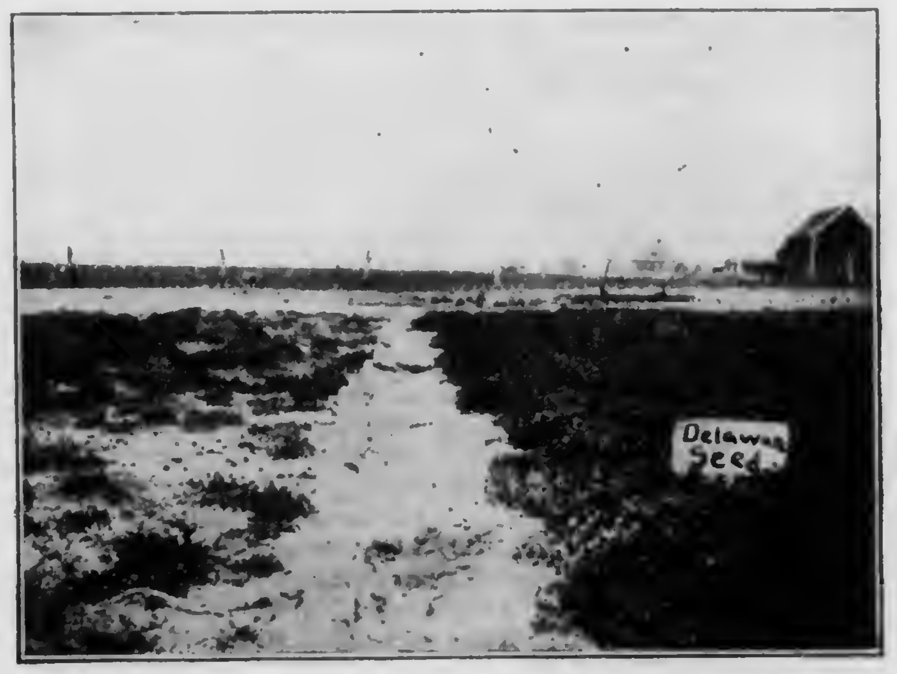
The only effective way of killing out the elder bushes is to starve out the roots by frequent cutting and then get rid of the roots by grubbing The claim that late August cutting will kill them is old, but we have known it to fail frequently and have seen no decisive successs with that treatment unless it was followed up as we have suggested. We shall be glad to have the experience of readers on this matter.

Can Crimson Clover Come Back?

Poor Seed Believed The Cause of Many Failures---By J. B. R. Dickey, N. J. Exp. Station

A few years ago splendid fields of crimson clover, sown in corn at the last cultivation or following potatoes or truck crops, were a common and pleasing sight in Southern New Jersey. The organic matter and nitrogen which the clover added to the soil when plowed under went far toward making the next crop and has been estimated as equal to 7 to 10 tons of good manure. Because the clover rotted down rapidly and gave up its plant food promptly it may have been even superior to manure. Not only did these cover crops add materially to the fertility of the soil but they prevented the leaching out of a large amount of plant food during the winter months to say nothing of the loss and annoyance from the blowing off of the surface when sandy soils were left bare.

During the last five years, however, a good stand of crimson clover has become almost a curiosity and the mention of crimson clover as a cover crop almost always calls forth the statement in emphatic terms that, whereas it used to be easy to grow, it is now no longer worth while to purchase seed. Not only have failures to get anything like a good stand in the fall been discouragingly common but where a stand was secured it would often be all gone by spring and one would apparently have nothing to plow under. Crimson clover is too valuable a crop, however, to be abandoned entirely as long as there is any hope of success and the fact that occasionally one still finds an excellent stand shows that it can yet be grown provided certain conditions are favorable.



Commercial Seed on Left; Delaware Seed on Right. Twenty Pounds Seed per Acre. Sown in August, Camden Co., N. J.

The frequent failures experienced have probably been due to one of several, or to a complication of, the following causes: First, there has been a great deal of very poor seed on the market. The report of the New Jersey Seed Analist for 1916 shows that over three-fifths of the seed tested germinated under 60 percent and over one-fifth fell below 40 percent. Samples often show little or no live seed. When one sows the usual amount of such poor seed he cannot hope for a stand. Not only this, but the vigor of seed of low germination is apt to be poor. Even if one secured a stand from this weak seed winter-killing would be very apt to destroy it, since New Jersey is near the northern limit of crimson clover growing and its use is not advised north of Trenton and New Brunswick. Weak seed would require the best possible conditions of moisture, etc., for germination and growth and, unfortunately, such conditions seldom prevail during the late summer.

As proof of the fact that poor seed has caused many failures a number of farmers in Cumberland County have been making a trip down into Delaware every summer and securing their seed direct from farmers or local dealers, where it is grown. Harvesting and threshing takes place in June, giving ample time to get new seed in time for sowing. In this way they obtained seed of the present years crops whereas that which reaches us thru commercial channels is always at least one year old and often older. Crimson clover seed looses its viability and vigor rapidly and the men referred to above have not only been getting better stands of clover with less seed than their neighbors but have had much less trouble with winter killing.

To further demonstrate the value of good fresh seed the writer secured four lots last summer direct from the growers in Delaware and distributed them among the county agents in five South Jersey counties. They were sown in the usual way in comparison with similar amounts of commercial seed secured from local sources. In every case there was a sharp contrast between the thick, vigorous stands secured from the fresh seed and the scattered and weaker plants from the commercial seed, as shown by the illustration. If the winter had been severe the commercial seed would probably have made a still poorer showing by spring. The difference in the color and appearance of the new and old seed was also striking and may be regarded as a fair indication of quality. The fresh seed was bright and yellow while the old seed was mostly a dull brown. A recent germination test, however, is the surest guide.

A very large proportion of our crimson clover seed has been coming from France and Italy. If the germination and vigor were good there might be no objection to the use of this seed but there is much delay in getting it into farmers hands and it is also probable that we have often gotten grades of foreign seed for which there was little demand abroad. High prices probably brought out many odds and ends which had been accumulating for years and these were sometimes mixed or "blended" with good seed.

Much seed is now coming from Tennessee and were it not for the high price of hay, which makes curing the clover crop more profitable than harvesting seed, the high price of the latter would no doubt stimulate production in Delaware and Maryland. As it is, the local demand seems to absorb nearly all the seed in these porducing sections and the only way to get such fresh seed is to go after it or order direct from Delaware seedsmen.

Crimson Clover in April. Sown in July. Middlesex Co., N. J.

Several years ago a disease of crimson clover called crown rot became severe in New Jersey. Lately it has not been reported, but whether it is simply because there are but few fields or because the disease has ceased to be severe would be hard to say. Let us hope the latter is the case.

Crimson clover does not fit in so well on a very poor or acid soil as some other legumes so that it is more suitable for maintaining the fertility of fairly good soils than for building up those which are exceedingly poor and sandy. The use of more lime and broadcast fertilization would no doubt help the success of this cover crop.

Disregard of moisture conditions at seeding time and the dry weather which has been common in late summer are also prolific causes of failure. When one sows a cover crop on a very dry soil one of three things is very apt to occur. The seed may lie in the hot, dry soil until it dies; it may be germinated by a light shower and then die for lack of moisture later; or a very heavy rain may beat down and wash the soil so that the seed cannot get up at all, especially if the land is heavy. If the soil is dry it is better policy to wait until after a good rain, then sow and cultivate in lightly as soon as possible; satisfactory germination will not take place at any rate until rain falls so no time is lost.

Lastly, the earlier crimson clover is sown as a cover crop, the better. July seems to be the best month, especially when seeding in corn. Later the corn shades the ground so closely, moisture is more apt to be the limiting factor and the corn is apt to be blown down so that cultivation cannot be given to cover the seed. If sown in good season not only will there be a larger fall growth and consequently more nitrogen and organic matter secured, but the plants may get well enough rooted to better withstand August droughts and will certainly be better able to resist winter injury. When sown after the middle of August it is a good plan to add two or three pecks of wheat or rye as protection against winter-killing and as insurance against failure. Ordinarily 15 to 18 pounds of good crimson clover seed is ample. Sowing later than September 1st is seldom wise unless extreme droughts have prevented earlier seeding.

PREPARING SURFACES FOR PAINTING

It is common practice when we do an odd job of painting around the home to simply apply the paint without thought in regard to the surface for foundation.

It is just as important that the surface be in good condition as it is that we select a good grade of paint —for no matter how good the paint, the result will be far from satisfactory if some attention is not given to this detail.

In the first place, the surface to be painted must be clean, dry and free from dust, grease and dirt. On new work, a thin coat of shellac should be applied to all knots and sappy places. On work that has been previously painted, use a wire brush to remove all loose particles, and spots that are entirely bare where the paint has chipped off, should be given priming coat of paint reduced with turpentine.

The extra labor in thus properly preparing the surface will be more than justified in the durability of the paint coat and the smooth, uniform appearance of the finished surface.

Excepting Plant Roots and Crop Refuses which remain in the ground after harvest, manure is the most economical material with which to provide humus, since it is the by-product left after the full commercial value of the fodder or grain has been secured in the products and gains produced by feeding the crops to live stock. The biggest leak on the average farm is the waste or deterioration of manures.

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PHILADELPHIA, PA., AUGUST 9, 1919.
VOLUME 46 NUMBER 6

Our job is to serve our readers. Whenever and wherever we can help you, write us.—The Editors.

Milk Advances

THE August advance in the price of milk in the Philadelphia district is the first in four months. Farmers are well aware of the factors pointed out by Dr. King, state milk arbitrator, as justification of the advance, viz, dairy feed 20 percent higher than last winter, labor costs higher than last year and cows higher because of the higher beef values. Present prices look high only in comparison with prices received four and five years ago. The man who figures costs closely will find no ground for increasing the number of milkers in his herd at present prices.

Out Again

ACCORDING to news dispatches from the northeastern part of the state, H. S. Bomberger has again been adding members to his State Cattlemen's Protective Association. According to the same dispatches he is again in trouble with prospects of numerous legal prosecutions by defrauded farmers and dairymen. Mr. Bomberger has operated in numerous sections of the state during the past ten years, offering varied inducements to farmers to become members of his Protective Association at from $10 to $25 per membership. He was on parole after conviction in Westmoreland County some years ago. The history of his operations would indicate that farmers will be wise to seek protection by having nothing to do with his Protective plans. There is slight virtue in court leniency with such a persistent offender.

Feeding Sprouted Grains

LAST week we suggested the possibility of utilizing some of the sprouted wheat and rye by feeding to hogs. The New Jersey Experiment Station calls attention to the fact that forage poisoning is likely to follow the feeding of either grain or straw that has been spoiled by rains. It says: "Records show that for centuries, wet spells like the recent one are followed by epidemics of digestive troubles and forage poisoning among animals, causing tremendous loss. Investigation has shown that spoiled grain in practically all cases is the direct cause." The Station warns against feeding grains so spoiled to either hogs, cattle, horses or poultry. On this suggestion the safest disposal of the spoiled grain and fodder is turning it back to the soil as manure.

Calling for Help

DURING the recent hot weather a number of dairymen complained to the officers of the Interstate Milk Producers' Association that milk dealers were turning down their milk on the claim of its being sour. Every week come complaints from dairymen that this or that is going wrong at their shipping station or in their dealings with shippers. Inquiry reveals the fact that these men are not members of the Association, but "Cant you do something to help us." The Interstate Association has done a great deal in the past two years to help dairymen of this district. It is made up of dairymen who want to help themselves and know how to go about it. It can help other dairymen only when they become members of the organization. It is a successful self-help movement, but you have got to be on the inside as a member to get all the benefits.

State Tractor Demonstrations

PLANS are all completed for the two large state tractor demonstrations to be held in this state this year; at Harrisburg August 12 and 13 and at Butler, August 21 and 22. Reports indicate that these two demonstrations will be the largest and most important ever held in the East. They will demonstrate some 25 to 30 of the best known tractors in the East in all of the ordinary work of the farm. There will be tractors designed especially for truck farmers, and tractors for the general farm. Each will be seen operating under as near ordinary farm conditions as is possible so that every visitor will be able to judge just what the machines can do for him on his own farm. Every prospective tractor owner owes it to himself to attend one or both of these meetings.

Seed Wheat

THE recent rains were not the only cause of poor quality of wheat this year. Reports from many section indicate a wide range in quality not only in the East but thruout the country. One western market observer predicts that the total yield of No. 1 wheat will fall far below the predicted crop. This is likely to have a marked effect on the market in spite of the "guaranteed" price. The government price applies to best grades only and the requirements are very high. If quality is low over the country, as now indicated, it will not be surprising if the price advances well above the guaranteed figure before next year. Shrunken wheat is the most common. The crop came thru the winter in wonderful condition and made rapid growth in the early spring. It was what has been characterized as "water wheat." When the hot weather came on, the grains shriveled badly and a large proportion of shrunken wheat is the result. In other sections the smut was unusually bad with the apparent result that the enormous crop so freely predicted thruout the early summer will shrink to normal figures or below.

In this section the heavy rains added the final touch to curtailing a crop of average quality. A few sections suffered so badly that seed wheat will have to be purchased from outside sources. Every farmer having wheat of seed quality should hold it until seeding time. Now is a good time to give some careful consideration to the seed question. Some varieties have shown startling weaknesses againts the adverso conditions of the season. A change in variety will be advisable for many.

Land Bank Bonds

LAST week we called attention to the McFadden bill in Congress proposing to remove tax exemptions on Federal Farm Loan bonds. Another effort toward the same end is an attack on the constitutionality of the farm loan act. According to a statement by the secretary of the Farm Mortgage Bankers' Association, suit was filed in the Federal Court at Kansas City, July 21, to test the constitutionality of the tax free clause of the law.

The solicitous statement by the Farm Mortgage Bankers' Association indicates the source of this attack and reveals an effort to destroy confidence in the bonds. And the fact that the McFadden bill is given very prominent mention in the published circular is ground for the suspicion at least that the same Association may be back of the McFadden measure.

According to statement by the Federal Land Bank of Baltimore, 155 Pennsylvania farmers made applications for loans at that bank during the month of June, this year, and loans of $459,-095 were approved. The amount of loans applied for at the Baltimore branch during June exceeded June of 1918 by 52½ percent and the increase of April, May and June of this year exceed the same three months of last year by 60 percent. The statement adds: "Pennsylvania heads the list of business (in the Baltimore district) this month for the first time. More farmers apply for loans, a greater sum of money is requested and a greater sum is loaned to farmers of Pennsylvania than to those of the other states."

Is this activity cutting into the business of the Farm Mortgage Bankers' Association?

Price Inquiry

A FEDERAL investigating committee has been appointed to inquire into the high cost of living and report back to President Wilson. Appointment of this committee followed a conference between the President and representatives of the Railway Engineers and Railway Trainmen. The labor organizations got quick preliminary action. It is understood that the labor men argued that living costs must be reduced or another increase in wages would be demanded. One of the labor leaders is quoted as saying that reductions in food and clothing prices are needed more than wage increases; that wage increases are invariably followed by an increase in cost of living and the situation presents an endless chain. Whatever other interests may think of the requests of the trainmen, all must agree that there is need of clarification of the wage and cost relationship. Whatever the investigators may find, the inquiry will not be complete unless it takes up all factors affecting present conditions. They are not food alone, but clothing, rents, fuel, household furnishings and all commodities entering into the life of the individual citizen. They are not costs alone, but also hours of labor, standards of efficiency of labor and factors in the labor supply. They are not in production costs alone, but also profits that are added by the numerous agencies that handle the commodities of life from production to final consumption. The endless chain complained of will always exist, and increased wages contribute quite as much to the increased cost of living as the cost of living contributes to necessity for high wages. There is need of the investigation, but it must be complete and include all factors.

Five remedial measures have been proposed in Congress which are likely to be the subject of considerable discussion during the investigating period. One proposes investigation of production costs of food and other commodities. Another suggests that the government sell the present wheat crop at the world price rather than at the guaranteed price and make up the difference to growers out of funds already appropriated. A third, which is definitely promised, is an investigation by the Federal Trade Commission of the cost of shoes, clothing, sugar and coffee. A fourth proposes heavy taxation of profits of large dealers in food and other essential commodities. A fifth would curtail the amount of money in circulation with the purpose of reducing prices on all commodities. None of these cover the ground of a general remedy.

As an indication of price advances in different groups of commodities, the following comparisons taken from the Monthly Labor Review of June, 1919, are of interest. The index numbers of wholesale prices show that for the year 1918 farm products showed an advance over the twelve-months' period of 16 points, as compared with 19 points for foods, 37 points for cloths and clothing, 14 points for fuel and lighting, 10 points for metals and metal products, 27 points for lumber and building materials, 45 points for house furnishing goods, 26 points for what is classed as miscellaneous and an average for all commodities of 21 points. Only two groups showed as small an advance during the war year as did farm products. Comparing the index figures of April of this year (the latest month available) with the figures for the same month last year, the figures show that farm products advanced 25 points, compared with 28 points for foods, a reduction of 15 points for cloths and clothing, advance of 9 points for fuels and lighting, a reduction of 23 points for metals and metal products, an increase of 16 points for lumber and building materials, an increase of 43 points for house furnishing goods, 22 points for miscellaneous and an average advance on all commodities of 12 points. Obviously there is a wide field for the investigating committee.

HARRISBURG LETTER

Concern Over Crops.—Altho it is hard to believe, the fact is, there has been more talk of crops than politics on Capitol Hill the last week, and from present indications more attention will be given to matters under the domain of the Department of Agriculture than to the governor's office for the next month or so. This is vacation time in the offices of the state government, the first real rest anyone has had from the hectic times devoted to legislating mainly for the benefit of the cities. With the reorganization of the departments postponed until the return of the governor, folks have had time to think about food production, better roads and other matters more intimately connected with real life. Hence the interest being taken in the agricultural situation by many who do not devote as much time as they might to such matters and who are now listening to Secretary of Agriculture Rasmussen instead of to county chairmen. It is realized here that, with labor short in fields, mines and many other places of production, a curtailment of the food supply next winter and spring is going to have more or less effect upon important elections and this may account for some of the thought being devoted to agricultural matters.

The Farm Situation.—The way reports coming here express it, the situation is that the loss in wheat due to weather will run more than expected a month ago, and some wheat, off color and otherwise damaged, will be fed to live stock; the oats crop will run short; corn is booming, barring some localities where storms have caused damage; vegetables have generally been aided by weather, and there are plenty of potatoes and other things despite some visitations from pests and bugs. The apple crop estimaters figure out that because of the bad weather conditions at the time of fertilization the crop will run about 4,000,000 bushels short, and other fruits will be hit accordingly. The apple situation is one which is causing more or less discussion, as it was hoped owing to the fact that many trees are just commencing to bear that a record crop could be produced and the Pennsylvania pippin pushed in the general markets. In some of the counties, taking the normal crop as a basis, the crop of apples will run from 80 to 90 percent, this holding good in such apple-producing counties as Adams, Franklin and York. Live stock seems to be in good shape, altho there is a shortage of horses.

New Director.—The State Bureau of Markets is to be given a try-out. There are some who have never been satisfied that it would go, some that were never satisfied with it when it did go, and some who are never satisfied with anything when it does go. Governor Sproul, author of the bill creating the bureau and backer of the bill reorganizing it, has asked Secretary of Agriculture Rasmussen to make it go more. The bureau has all of the law and much of the opportunity to make a success, and Guy C. Smith, who put the Connecticut marketing agency of the state government on the map, has been chosen to head the bureau. Mr. Smith, who comes from Chicago University and has had wide experience in New England where marketing is more of a problem than in the Keystone State, is a student of economics, a writer on this subject and on farm financing, organizer of cooperative associations and otherwise qualified to tackle the job. He will come here to study Pennsylvania, its people, its farms and its transportation, and then work out a plan. It is refreshing here to run across some one who does not have a panacea for every ill. There were so many at large the last four years that study of a situation is urged at the Capitol as the wisest thing to do nowadays. Mr. Smith's experience in New York and New England and his observations in various states, together with his service in organizing the co-operative plans should enable him to make a valuable survey in this state.

Four Classes of Eggs.—Eggs are now officially divided into four classes in Pennsylvania. After several weeks of discussion and many tests, the Department of Agriculture has worked out a plan whereby the law forbidding sale of stale eggs as fresh can be administered. Scientific tests have been worked out and a formal ruling will be spread broadcast. At the same time the state will insist upon cold-storage eggs being so placarded when sold to the public and that rotten eggs be handled according to well-defined rules.

Trouble Over Schools. — The last legislature left the average school district up in the air. The teachers' salary increase law has not yet been reduced to that plane where the ordinary mind can grasp it, altho there is a painful idea among men that many a district will have to increase its tax rate. Districts by the dozen have gone the limit both as to rates and borrowing and are frankly unable to do more. Just now there appears to be need for a definition to come from the state school authorities on whether the salary follows the teacher or the job, how districts that are at the limit of their resources are to finance the increase, and when the state is going to extend financial aid. It should not be forgotten that the State money is given as a reimbursement and the first outlay falls on the district. Until certain rulings are made the district boards are, in fact, up against it and the opening of the school year is not far off.

Telephone Rates.—In all probability the whole problem of telephone rates will be gone into again by state authorities now that the telephones are once more under control of the Commonwealth. The first steps have been taken by fixing a date for a hearing at which it is likely various cities will take a hand. General advances have been under way, and it is intimated that some mergers, which would not be an unmixed sorrow, are about to be made under new laws.

The Joint Survey.—State authorities have asked farmers to supply the Federal Government with data regarding their crops and acreage on the blanks which are now being sent out, it being the idea to secure a measure of co-operation which will be valuable in estimating crops. Mutual benefit, it is pointed out, will follow prompt and careful reports.—Hamilton, Harrisburg, Aug. 4, 1919.

NEW YORK LETTER

Practical Farmers' Outing.—The Cayuga County Breeders' Association held a unique meeting, a picnic on the farm of a leading Guernsey breeder. Hundreds of milk consumers of the city of Auburn were present to learn facts about milk production. Dr. Day of the New York City Board of Health made an address on the relation of producers and consumers of milk and the final event, was the witnessing of the milking by machinery of the 75 pure bred Guernsey cows owned by the host.

Potato Diseases Studied.—Dr. F. M. Barrus, leading authority on potato diseases is touring Cortland County this week giving talks in the potato fields to interested farmers on the potato diseases most prevalent and methods of control. In the absence of federal funds in future to pay for potato inspection the New York State Potato Growers's Association issues its new rules for inspection, fixing fees to pay for the same. In brief, $5 pays for inspection of fields of five acres or less, with an extra charge of $1 per acre up to ten acres, and 75 cents per acre for all above ten. Details of the standard of requirements for certified seed are also issued, and altho the freedom from disease or varietal mixture seems almost unattainably high, yet good seed and right methods insure a premium of 50 cents and upwards per bushel to pay for the extra trouble.

Market Notes. — Dressed veal reached the record price of 28 cents a pound on the Syracuse public market this week and pork advanced to 27 cents. Home grown new potatoes brought $2.50 to $3 a bushel, windfall apples $1.50 and picked apples $2.50 bushel. Home grown cucumbers and sweet corn are becoming plentiful, the latter at 15 to 20 cents a dozen. The August milk price will be 12 cents a hundred more than the July price, or $3.11 in the central counties for 3 percent milk, subject to the usual freight differentials. The price took into account that the average market price for butter during July was $.5198 per pound and for cheese was $.3131 a pound. The July retail price of butter has run from 60 to 70 cents and cheese has been 40 cents in most places. Long blackberries bring 25 cents now.

Cheese Again Advances.—The latest returns from the Watertown and Gouverneur Dairy Boards show offerings of cheese less than a week ago and the price advanced to 31¾ cents a pound. The price a year ago was 24⅛ cents. Salamanca factories received 31⅛ and Plymouth 31¼. Brockville cheese sold at 25 cents, at Montreal, less the cost of freight to thta city, the price having been established by the British food ministry.

Cortland Wool Tops the Market.—Altho one of the last counties to sell their pooled wool, the Cortland growers have made the finest sale in the state. A Syracuse company was the purchaser and payment was made at time of delivery. Following are the prices received by various counties:

	Medium Grade	Rejects
Cortland	65c	50c
Erie	57c	45c
Orleans	60c	45c
Otsego	62½c	42c
Ontario	60c	53c
Tompkins, Cayuga, Broome and Tioga	61c	50c

Cortland's wool graded 95 percent medium both this year and last. Many Cortland hill farms have been stocked with sheep by Westerners, who claim conditions are better here than in the West for wool production. One flock of 1,800 shipped here from Oregon and other States is pronounced as unusually vigorous, with large, healthy lambs.

Big Opening Day for Fair.—The opening or Syracuse day of the State fair will be the biggest in the fair's history. Motor racing, having been suspended since the great fatalities in 1911, will be resumed again this year on Saturday, the last day. The Onondaga Indian Reservation will make noteworthy exhibits of their industries this year. On Friday Americanization day will be celebrated, and pageants of fine character will be presented along this line. The dramatic art department will put on many rural dramas showing local history of various parts of the State, with the acts done by home talent.

Milk Plants Burned.—Two Borden milk plants at Perunton and Theresa burned on Saturday night, no cause known. The great storms of Saturday and Sunday morning killed scores of cattle and horses and burned dozens of barns, mostly with hay and tools. Trees were uprooted and crops washed out all over Central New York. There were several human lives lost also, the result of the almost unequaled lightning display.

Convict Road Notes.—Work is going slowly on some road sections worked by convicts. Less than half the original workers remain in one camp, as they refused to work and were returned. Five convicts escaped in forty-eight hours last week. All but one of these and previous escapes have been recaptured. Many who are given opportunity to work on these gangs refuse, for fear of the temptation to escape that the comparative freedom gives. Only short-term prisoners are sent on road work and escapes have to serve their full terms.

Daylight Saving Indignation. — The farmers of the main milk-producing centers for New York City supply are more indignant over the developments in the daylight saving law than over any other comparatively small matter in history. Cattle need the night time in which to feed, as the heat and flies by day prevent, and in order to have them on hand in time for the before-daylight milking necessary from now on they have to be confined over night in stables or yards, thus reducing the milk yield. Dairymen are wondering what combined action to take next to bring the President to see that their all-important hours of work must not be tampered with. It would be so easy to give city pleasure lovers the advantages of the present law without interfering with the time of milk trains school hours, and the hours of sleep of children and invalids that it seems almost unbelievable that our chief executive should so overtax those who feed the country. It is the verdict everywhere in the country that farmers need the normal day limits.

Two Important Meetings. — The New York State Potato Growers' Association holds its annual meeting on the farm of C. A. Lacy, Little Utica, Onondaga County, on August 9. Discussion of potato diseases will be the chief topic of the program. The New York State Sheep Growers' Association meets at Cooperstown August 13, on the Glimmer Glen farms, with an excellent program. On the following day over 300 head of purebred sheep will be sold at public auction. Otsego County, where the meeting is, leads the State in the number of its purebred sheep.—F.

NEW JERSEY LETTER

Milk and Cream Prices. — Milk served in municipalities in the state embraced in the Philadelphia zone has been advanced from eight to nine cents per quart. A charge of eight cents per quart prevailed during April, May, June and July. Best grades of cream are now selling within the Philadelphia zone in New Jersey at $1 per quart instead of 92 cents as heretofore.

Fruits and Vegetables at Moderate Prices.—The markets throughout the state are offering a variety of fruits and vegetables, with moderate prices prevailing and with a fair amount of stock. The splendid weather conditions have resulted in many exceptional offerings.

Will Enlarge Municipal Dock Market.—So much demand is being made on the space at Trenton's first municipal dock market by farmers of Central New Jersey that Mayor Donnelly, who was responsible for the establishment of this market, is planning its enlargement. It was believed when it was established that it would give accommodations to all truckers who used it during the present year at least, but the large number of farmers who are taking advantage of the place makes it imperative to provide additional space as soon as possible. James E. O'Donovan, Trenton's sealer of weights and measures, is ready to have bids submitted for the work of providing space for at least forty more trucks and other vehicles carrying the produce, which will mean the developing of 300 additional feet at the market.

Boy and Girl Workers.—More than 300 boys and girls leave the Morris County Courthouse at Morristown every morning of the week at the present time to work on farms in various parts of North Jersey. The total number of juvenile agriculturists now listed is 829. One hundred and eight boys and girls performed daily farm work in Morris County during the month of May last and 1,992 during June and July. Some of the work accomplished was weeding 114 acres, picking 969 crates of strawberries, picking 720 crates of currants, picking 7,000 pepper and other plants, picking 829 bushels of peas, setting out 12,100 cabbage plants, cutting 253 bushels of spinach, and setting out 19 acres of tomato plants. One of the farmers has been utilizing the labor of six girls since the beginning of summer in pulling, counting and packing 20,000 young plants of various kinds daily.

Boys' Pig Clubs.—Boys' Pig Clubs have been showing fine returns in feeding tests. The boys are using self-feeders, and the pigs which were allowed to select their own feed have made gains of two pounds per day. The club members have proved beyond question the merits of the self-feeder, and veteran hog raisers in the state are beginning to copy the methods employed by the boys. As a result of the pig contest club work some of the county agricultural agents report many fathers and older sons are planning to enter partnership and raise purebred hogs.—K.

MARYLAND FAIRS

Town	Date
Taneytown	Aug. 12, 13, 14, 15
Pocomoke City	Aug. 19, 20, 21, 22
Rockville	Aug. 26, 27, 28, 29
Salisbury	Aug. 26, 27, 28, 29
Timonium	Sept. 1, 2, 3, 4, 5, 6
Laurel	Oct. 1-31
Hagerstown	Oct. 14, 15, 16, 17
Frederick	Oct. 21, 22, 23, 24

DELAWARE STATE FAIR

Wilmington, Del. Sept. 1-5

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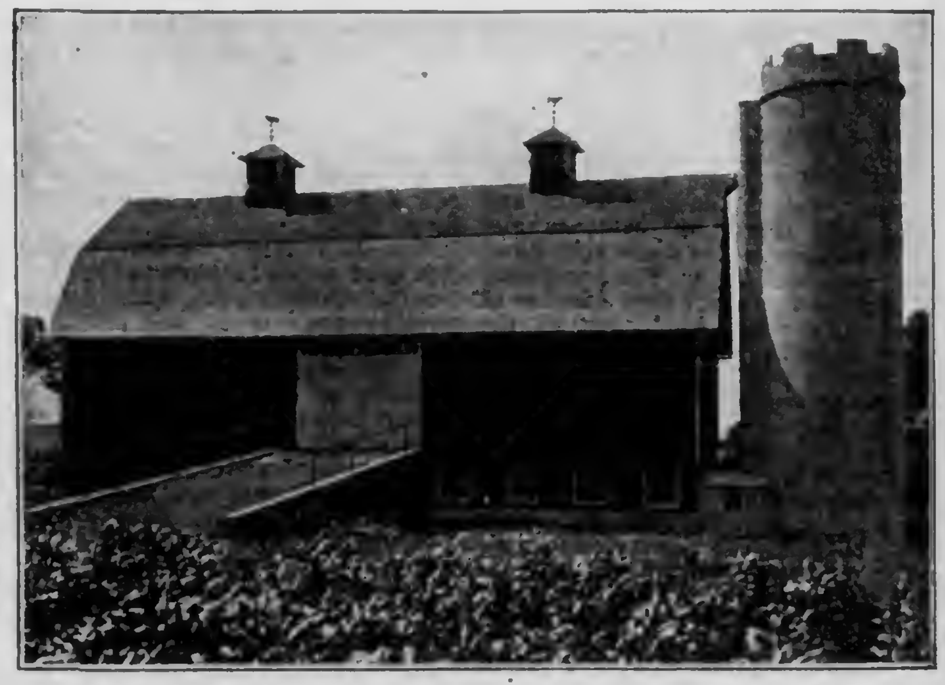
Organized Sale of Special Product

Long Island Farmers Cooperate in Sale of Corn For Silage Purposes

Nearly everyday announcement is made of the inception of a new farmer's cooperative organization. Few live except those which are born of necessity. The Suffolk Cooperative Association organized for the purpose of selling Luce's Favorite seed corn grown by Long Island farmers to farmers of Northern New York and adjacent territory, appears to fill this qualification. The farmers of Long Island need an agency to dispose of their seed corn of this variety, and the farmers of Northern New York need, and badly need, a source of reliable seed of a variety adapted to their growing season for silage purposes.

The origin and breeding of Luce's Favorite is somewhat vague but it is today fixed in type tho still variable in some respects. This, however, does not affect its value for silage purposes in Northern New York where tests have shown it to fulfill the qualifications of a good silage corn.



The Silo an Imposing Adjunct to Every Up-to-Date Dairy Farm

It seems generally understood by farmers that the value of a variety of corn for silage is measured by the dry matter it will produce on a given area, and the proportion of dry matter derived from ears. This is indicated by maturity. Hence, varieties which mature have the following advantages over varieties which will not mature. (In this case by mature is meant the denting or glazing stage and not necessarily the degree of maturity required by good husking corn.) First, greater production of dry matter; second, less green weight to handle; third, superior composition for feeding purposes; fourth, less destruction of dry matter as a result of fermentation in the silo; fifth, higher digestibility; and sixth, greater palatability. Figures from a test conducted in St. Lawrence County will help to understand these advantages. Hence, the following table:

Variety	Tons of Green Matter Acre	Tons of Dry Matter Acre	Pounds Protein Acre	Pounds Nitrogen Free Extract Acre	Pounds Fibre Acre	Pounds Fat Acre	Pounds Digestible Nutrients
Ave. 5 Mature	15.4	3.79	632	4897	1295	155	5277
Ave. 5 Immature	16.3	3.11	509	3930	1457	94	3826

In this test the mature varieties reached the denting or glazing stage in each case, whereas the immature varieties ranged from the early milk stage in one case, the milk stage in one, and the dough stage in three. Incidentally, some of the long growing varieties, like Eureka, Sweepstakes, Red Cobs, Mammoth White, and Virginia Horse Tooth, will reach no more than the milk stage in St. Lawrence and many other counties.

An analysis of this table bears out the advantages given above quite clearly. It seems unnecessary to explain it, tho it may be stated that individual varieties often show greater differences in favor of properly matured corn than do the averages given.

Luce's Favorite appears to fulfill these requirements of good silage thru the greater part of New York state. Tests have been conducted in 35 counties and the majority of these tests bear testimony to its superiority. From the results of many tests, the following conducted in Herkimer County seems fairly representative of what may be expected from this variety:

Silage Corn Test—Herkimer Co.—1917

Variety	Maturity	Acre Tons Green Weight	Acre Weight Dry Matter Pounds
Big Red Dent	Milk	11. 3	3430
Lake Erie Dent	Milk	12. 5	3587
Gold Nugget	Glazed	8. 1	3614
Luce's Favorite	Glazed	14. 7	6599
Pride of the North	Milk	13. 0	3717
Eureka	Silk	16.06	2876
Leaming	Milk	11. 4	3264

This indicates the yield of green and dry matter as compared with other varieties commonly grown in the county. I have no figures showing the percentage of dry matter in the form of ears, which is especially valuable as a guide of the composition because presence of ears makes a silage very superior in composition to one having few or no ears. Generally corn grown for silage in localities having a limited growing season varies from no ears to as high as 50 percent of the dry matter. Luce's Favorite will, under most climatic conditions and in practically all below 1,200 feet in elevation, produce in the neighborhood of 35 percent of the dry matter in the form of ears.

Many times varieties of exceptional qualities are developed without a simultaneous development of a source of seed which may be relied upon. In the case of Luce's Favorite, the farmers growing it on Long Island have organized the Suffolk Cooperative Association for the purpose of selling their corn for seed and at the same time supply the farmers up-state and in localities having short seasons with a thoroly reliable seed. It springs from a double need. Preparations are rapidly progressing for the efficient handling of the seed. A field inspection of the corn was made last September and a crib inspection followed in December. In each of these inspections corn was condemned as unfit for use for one or more of a number of reasons, foremost among which are: Because it was not true to type, poorly matured, poorly housed, or poorly sorted. Those lots not condemned were to be delievered to the organization's plant where it was to be shelled, dried, sorted, bagged and tested for germination prior to shipment.—John H. Voorhees, Cornell University.

JUNIATA COUNTY COW RECORDS

The Juniata County Cow-Testing Association showed 13 cows during the month of April with records of over 40 pounds of butter fat or over 1,000 pounds of milk. During May there were 15 cows with such records, and during June there were again 15 record makers. Cows getting on the honor roll for June were as follows:

Owner of Cow	Pounds Milk	Pounds Butter Fat
W. E. McMeen	1116	37.94
W. E. McMeen	1017	37.63
G. P. McConnell	1287	38.61
G. P. McConnell	1176	34.10
G. P. McConnell	1116	36.83
I. H. Book	1137	40.93
I. H. Book	1002	36.07
I. H. Book	1023	30.96
J. H. Noss	1158	37.06
H. I. Gray	1185	52.14
H. I. Gray	1095	39.42
J. H. Deen	1023	36.83
J. H. Hower	1059	31.77
J. H. Hower	1137	39.80
Theoris Kauffman	1086	31.49

DAIRY CATTLE INCREASING

Washington, D. C.—Twenty-nine countries each have more than 2,000,000 cattle. The United States has not the greatest number, as many people suppose, but ranks second to India by more than 100,000,000. During the last 33 years Guernseys led by far all other breeds in number of purebred cattle imported into this country, and of the five breeds leading the importations, four were distinctly dairy types.

More than 8,750 Guernsey cattle were imported; Jersey ranked second in numbers, with Durhams, including Shorthorns, third, Holsteins fourth, and Ayrshires fifth. The volume of purebred cattle importations has been extremely variable.

These are a few of many facts about the dairy industry that are brought out in Circular 7, recently published by the U. S. Department of Agriculture, which shows, chiefly by graphic charts, the trend of the industry in this country and its relation to the world trend.

The circular reports statistics of cattle in the various countries as far back as 1850, when the earliest dependable information was recorded. Compared with other decades the world has had more cattle in recent years than ever before, altho it must be remembered that population has increased also. Owing to the wide variations in the quality of herds in the different countries, the circular says, the charts must not be considered as an indication of relative meat or dairy resources.

The circular says the general trend of cattle development is: First, work animals; next, raising cattle for commercial beef; and, finally, commercial dairying in addition to the business of meat production. Thruout the world the cattle industry shows general growth, but has made its greatest advance in regions where pasturage and feeds are more abundant. The recent trend of cattle development indicates that beef production and dairying are progressing, generally, outside of the immediate war area. Countries which depend largely on imported feeds appear to maintain relatively few cattle in addition to their dairy cows, which have gradually replaced other cattle.

Dairy cows have shown less fluctuation in number than total cattle. This condition is noteworthy thruout the world over long periods, including adverse conditions, such as disease, drought, and war. European experiences indicate that when a country has reached the practical limit of cattle the land will maintain further increase of milk production is obtained by improving the yield per cow.

It appears logical that the United States can best meet changed world conditions, first, by increasing simultaneously both the number and quality of its cattle; second, by constant attention to economy of production; and third, by maintenance of cattle raising and dairying in conjunction with general farming, thus reducing dependence on purchased feeds.

AUGUST MILK PRICE

The Inter-State Milk Producers' Association announces the following schedule of milk prices going into effect August 1, subject to change whenever warranted by market conditions. When milk is not tested the price f. o. b. Philadelphia is to be 9 cents per quart.

Test per cent	Price per 100 lbs.	Price per quart
3.	$3.76	8.1
3.1	3.78	8.2
3.2	3.82	8.3
3.3	3.86	8.4
3.4	3.90	8.5
3.5	3.94	8.6
3.6	3.98	8.65
3.7	4.02	8.7
3.8	4.06	8.8
3.9	4.10	8.9
4.	4.14	9.
4.1	4.18	9.1
4.2	4.22	9.2
4.3	4.26	9.3
4.4	4.30	9.35
4.5	4.34	9.4
4.6	4.38	9.5
4.7	4.42	9.6
4.8	4.46	9.7
4.9	4.50	9.8
5.	4.54	9.9

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WILLIAMSPORT, 500 Campbell St.
WILMINGTON, 219 W. 9th St.
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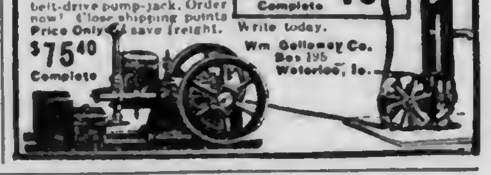

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Farm Products Prices and Prospects

RAIN DAMAGE

Pennsylvania

Berks Co. (SE).—At least 25 percent of the wheat in this county was caught in the recent rains. Of this from 50 to 75 percent was damaged. Very little direct damage was done to oats by the rains, but they are so ripe that at least 50 percent falls out in handling. Corn was helped by the rains. Potatoes are looking good, except that the unsprayed fields are showing tip burn, etc. From 15 to 20 percent of the hay of the county was on the field, cut or uncut. The quality was much reduced. Peaches were damaged in quality. There is more rot and a general lack of flavor in the early varieties.—Chas S. Adams.

Northumberland Co. (C).—Not over 10 percent of the wheat of this county was out in the recent rains. Of this perhaps 25 percent was damaged. Oats were damaged about 10 percent. Potatoes are showing a very uneven stand. Insect injury is slight so far. Blight and wilt are appearing in some localities. Some hay was damaged by the rains after cutting, with a loss of probably 2 to 3 percent. Work was delayed by the rains, and from 10 to 15 percent of the timothy is still standing. It is coarse in quality. The rains also delayed buckwheat seeding, and the acreage will thus be less than the normal. Rye was damaged 8 to 10 percent.—J. M. Fry.

Luzerne Co. (E).—About 35 percent of the wheat was in the field during the wet spell. Of this about 25 percent sprouted. The rains delayed hay making and some hay has already been spoiled. Potatoes are above the average in this county.—H. N. Cobb.

Butler Co. (W).—The rains of the eastern section did not reach this county. There has been no damage by rains, but rather by the lack of it. Oats are about one-half crop. Potatoes and buckwheat are suffering badly from lack of rain. There is a poor outlook for next year's hay because of the hot, dry weather.—Robt. C. Wiggins.

Centre Co. (C).—The recent rains caught about 50 percent of the wheat of the county in the fields. About 10 percent of that was damaged to a certain extent. Very little damage was done to oats, as they are still standing. Corn did not suffer, except in one or two localities where hail hit the crop. Potatoes are showing none too good. Indications are for about 75 percent of a crop.—R. H. Olmstead.

Columbia Co. (C).—About 20 percent of our wheat was caught in the rains and perhaps 15 percent damaged. Corn and oats suffered very little if at all. Potatoes are very good generally, altho there is quite a little leaf curl.—County Agent.

Clinton Co. (N).—About three-fourths of the wheat of this county was out in the fields, but very little damage was done here. Potatoes promise fair. Much hay is in poor condition.—County Agent.

Montgomery Co. (SE).—About 40 percent of our wheat was out in the fields and from 80 to 100 percent was damaged by the rains. Oat damage will amount to from 50 to 75 percent loss. Corn was improved rather than damaged by the rains. Most of the potatoes of the county are scalding from the excessive rains, and I believe that at least 50 percent will rot in the ground. Uncut timothy is reduced in value about 50 percent. Probably 20 percent is still to be cut. Fruit is brown rotting and truck is damaged proportionately.—County Agent.

Susquehanna Co. (NW).—Very little damage was done to wheat in this section, as little of it had been cut. There was some lodging due to the rains. Oats were not damaged except for the lodging, perhaps 5 percent of them are down. Potatoes are only fair in this county. There is a poor stand and an abundance of bugs. Hay was damaged to quite a large extent; it is much discolored.—B. H. Engle.

Blair Co. (C).—From 60 to 79 percent of our wheat was in the fields and there was a 10 to 20 percent damage from rains. Early potatoes are badly hurt by tip burn; others good. Hay suffered a 20 percent damage from the rains. Fungous diseases of fruits and vegetables developed greatly during the rainy spell.—B. R. Dunlap.

Lehigh Co. (EC).—About 30 percent of the wheat was in the fields and it was badly sprouted; all damaged for milling. The storms leveled some oat fields. The damage was not severe, but the crop will be light. Corn did not suffer except for washouts. Potatoes promise well; foliage is very heavy. The rains interfered with cutting of second crop alfalfa.—A. L. Hacker.

How Continuous Rains Sprouted Wheat in Shock

Lebanon Co. (SE).—Some 30 percent of our wheat was out and there was from 40 to 50 percent loss in that amount. Oats were not damaged over 10 percent, mainly from lodging. No damage to corn. Potato conditions are very good, but some fields are very weedy, due to too much rain. Early potatoes are good size, but there are only a few to a stalk. Most of the hay was out of the way before the rains. Brown rot in peaches showing.—County Agent.

Northampton Co. (EC).—A little more than 50 percent of the wheat was out and there was from 10 to 15 percent damage. Most of the damage was due to careless shocking. Oats were damaged very slightly and corn not at all. The wet weather improved potatoes considerably. A 50 percent crop is expected. The shortage is due to leaf roll and rhizatonia. There was poor seed selection. Very little damage to other crops.—County Agent.

Delaware Co. (SE).—About 60 percent of our wheat was out. It was very badly sprouted. The best shocks contained two or three sheaves in the center that could be saved. Mostly unfit for threshing. One hundred thousand bushels lost or damaged. Oats were not damaged seriously. The crop is mostly in good condition, except where wind blew it down. Corn is undamaged in southern and eastern parts of the county; high winds blew it down in western townships. No damage to potatoes except in low places where fields were flooded. Our hay was mostly harvested. Hay in fields badly discolored; some loss.—D. Watson Atkinson.

Huntingdon Co. (C).—About 70 percent of wheat in fields and 8 percent of it damaged. Potatoes promise about 70 percent crop. There was a 10 percent loss of hay. Barley and rye suffered about 8 percent loss.—County Agent.

Franklin Co. (SC).—About 10 per cent of the wheat was out, but not over 5 percent of this was damaged. Oats were not damaged, but the harvest delayed. Potato prospects are fair. Little hay was damaged. Hay making was delayed on account of wet weather. About 15 percent of the hay yet to be made. There was probably a 10 percent loss in rye due to sprouting.—Edwin A. Rice.

Juniata Co. (C).—Approximately 50 percent of the wheat of the county was caught in the rains. A great deal of it started to grow in the shock, probably 5 to 8 percent. The straw was damaged considerably. Oats were not damaged much except some fields where lodging will cause some loss. Some corn fields were badly washed, but the crop was not damaged much. Potatoes look well except for some tip burn. Considerable hay was damaged. That not cut became overripe, especially clover. However, the timothy still made good hay. Other crops were not damaged except where caught by high water.—D. R. Pheasant.

Bucks Co. (SE).—About 33 percent of the wheat was out in the upper half of our county; 50 percent in the lower; average, 38 percent. Eighty percent of the wheat in the fields was destroyed for milling purposes. Much of the oats down and there was perhaps a 20 percent loss. Potatoes badly eaten by flea beetle and affected by early and late blight. Poor seed the chief cause of the poor crop. Timothy hay still in the fields is badly stripped and tangled.—N. E. Garber.

Schuylkill Co. (EC).—At least 40 percent of our wheat was out, all of which is unfit for flour, and much of it will make poor feed. Oats apparently escaped damage. Potatoes are about normal. While many fields show a poor stand, others are excellent. About 70 percent of our hay was made before the rains, but what was out is practically worthless for feed. Most crops were damaged in poorly drained spots.—W. L. Bollinger.

One of the Fields Caught by Rains With Wheat Sheaves on Ground

Dauphin Co. (C).—Some 35 percent of our wheat was out and one-third of this was destroyed. There was a loss of 50 percent on the oats. Potato prospects are good. There was considerable loss on the hay. One-third of the rye in the fields was lost.—H. G. Niesley.

Lycoming Co. (NC).—About 60 percent of our wheat was out, and this was considerably damaged. There was little other damage.—P. R. Kraybill.

Tioga Co. (NC).—About 30 percent of our wheat was out, but it was not badly damaged—less than 3 percent. Oats are fair, except that the straw is shorter than usual. Corn is late because of the late spring. Potato prospects are good. The clover crop is the best in years, especially alsike. Timothy is not quite as good, about a 90 percent crop. There is very little fruit here this year, but not due to rains.—E. J. Perry

Cumberland Co. (S).—It is estimated that 2,500 acres of wheat was out in the heavy rains, equivalent to one-twentieth of our wheat area. Some of the outstanding wheat was totally lost, while others better shocked is in fairly good condition. Shattering will be serious. The loss will run from 33 to 50 percent of the exposed crop. Lodging of oats caused by the wet weather, together with over ripeness caused by delay in cutting, make total oat loss from 5 to 20 percent. There was little damage to corn. Potatoes are generally good, except that early varieties are dying quite badly. The acreage of hay damaged by the rains is estimated at 500 acres, but the loss is not serious, not over 5 percent. Rye was damaged about 5 percent.—P. L. Eldinger.

Clearfield Co. (C).—Nearly all of the wheat in this county was out in the rains, but the loss was very slight. We got but one day of heavy rain and crops are generally promising.—W. C. Sterrett.

New York State

Delaware Co. (SE).—Very little wheat grown in this county. Oats are not ripe, but the recent rains and heavy winds have caused considerable lodging. Corn is generally good, except a little blown down. Haying was half to two-thirds done when the rains came on. It is practically all done now. There was some damage, but on the whole the rains were a benefit, as it was very dry here.—E. G. B.

Tioga Co. (SC).—About 70 percent of our wheat was out, but the damage was not serious—perhaps 10 per cent. Oats were damaged about 15 percent. Corn was helped by the rains, as it had been dry here. Potatoes are fair, gaining since the rains. Most of the hay was in before the rains and no damage done.—E. R. Zimmer.

Sullivan Co. (SE).—There is practically no wheat grown in this county, so there was no damage. The oat crop has not been greatly damaged, not over 2 percent. Potatoes look good and promise a good crop. Rains delayed haying and did some damage there.—Chas. Wille.

Broome Co. (SE).—Rains were not heavy enough to do serious damage here. They were really a benefit. Only a little wheat was cut in the fields when the rain came and there was no damage. Potatoes look good, indicating 95 percent of a crop.—J. F. E.

Cortland Co. (C).—We have not had a surplus of rain. Hay is nearly all up and in excellent condition. Potatoes look fine and corn was never better at this time of the year.—County Agent.

Schuyler Co. (C).—Rain did not hit us hard. Did no damage to wheat and improved oats and corn. Potatoes are good where sprayed. Bugs and leaf hoppers serious. No blight to speak of. A little damage done to hay.—Harry G. Chapin.

Orange Co. (SE).—Nearly all of the wheat of this county was out in the recent rains. Standing wheat was lodged some. One-fifth of the shocked wheat was sprouted in the shock. Damage not as great as feared. Oats were too short to be greatly damaged. Corn and potatoes were improved by the rains. Hay that was cut was damaged considerably. Small amount of standing hay not affected. Onions, celery and lettuce were under water for a short time, but no serious damage expected.—County Agent.

Chemung Co. (SC).—About 75 percent of our wheat was out, but very little damage done. Very little damage to other crops, but much benefit.—T. W. Vann.

Tompkins Co. (C).—We have not had an excess of rain. Some portions of the county are really suffering from lack of rain. Others have had a plenty, but not in a continuous way to interfere with harvesting or injure hay or grains.—V. B. Blatchley.

New Jersey

Middlesex Co. (C).—From 30 to 40 percent of our wheat was caught out and this suffered 98 percent damage. Oats were damaged about 50 percent. There was some lodging of corn, but not serious. Potatoes look very good at present, but we are fearful of prospects. Probably 10 percent of the hay was damaged; much of the timothy is too ripe to cut now. Rye that was in stacks was sprouted so badly that some of the farmers have thought it advisable to restack.—Lee W. Crittenden.

Bergen Co. (NE).—Nearly all of the wheat in this county was out and it was damaged badly. High winds lodged much of the oats. Most of the hay was in before the rains. Little other effect except the indirect losses from blighting of tomatoes and eggplants which were not sprayed.—W. Raymond Stone.

Atlantic Co. (SE).—No wheat raised in this county. Oats were damaged perhaps 10 percent. Corn was improved by the rains. Farmers digging early potatoes; 50 to 60 percent of crop. Rains damaged early tomatoes somewhat.—A. E. Wilkenson.

Cape May Co. (SE).—There is not much wheat grown in this county, but that out suffered about 50 percent damage. Early potatoes are about half crop. Late planting are just coming up; fairly good. Some reporting rotting of seed. Hay that was down is about 35 percent damaged by mould and leaching. About 50 percent of canhouse tomatoes show appearance of blight.—County Agent.

Somerset Co. (C).—About 50 percent of the wheat was out and this was damaged about 80 percent. Oats were damaged 40 percent. Potatoes promise 75 percent of normal. Normally 75 percent of the hay is in by harvest time; perhaps 50 percent of that still out was damaged.—Harry C. Hines.

Passaic Co. (N).—About 30 percent of the wheat was out and 50 percent of this was sprouted and is gone. Oats were lodged somewhat. Some corn went down in the rains. Potatoes are coming along fine. A little uncut hay is damaged. Tomatoes are cracking and some onions are mildewing.—H. E. Wettyery.

Sussex Co. (NW).—About 60 percent. of wheat out and 50 percent of this was damaged. Many fields of oats will be extremely hard to harvest. Potatoes are good here. Hay that was out deteriorated in value.—H. E. Baldinger.

Additional Maryland

Wicomico Co. (SE).—About 50 percent of our wheat out and this suffered 50 percent. About 80 percent of the oats were damaged. Potatoes are fair. Hay was practically all in. Rye was damaged somewhat, but tomato plants were not far enough along to be hurt.—G. R. Cobb.

Anne Arundel Co. (C).—About 75 percent of the wheat cut and left in the fields sprouted. Corn is good, but cultivation was delayed. Potatoes are first class. Very little damage to hay. Truck and fruit suffered heavily but melons and later crops were benefited. Tobacco was helped.—Geo. W. Norris.

Somerset Co. (SE).—From 40 to 50 percent of the wheat was out and 25 to 30 percent of this was damaged. Corn is weedy. Early potatoes were not damaged, as they were being dug. Late potatoes are being planted. Hay all in. Early tomatoes were damaged.—C. Z. Kille.

Dorchester Co. (E).—Fifty percent of the wheat was out and this was damaged 15 to 20 percent. Oats and corn were not damaged. Potatoes are backward. Hay was all in. Tomatoes were badly damaged.—John F. Davis.

Talbot Co. (E).—About three-fourths of our wheat was out and 50 percent of this was damaged. Practically no damage to corn except on low lands; fields are weedy. Hay has been helped. Tomatoes considerably damaged on low lands. Brown rot showing on peaches.—E. P. Walls.

Charles Co. (S).—About 85 percent of our wheat out and this damaged some 75 percent. Corn was damaged slightly. Early potatoes are about 40 percent of crop; late potatoes just coming up. Most of the hay was in. Third cutting of alfalfa will be greatly helped by the rains. Tobacco was damaged somewhat.—John P. Burdette.

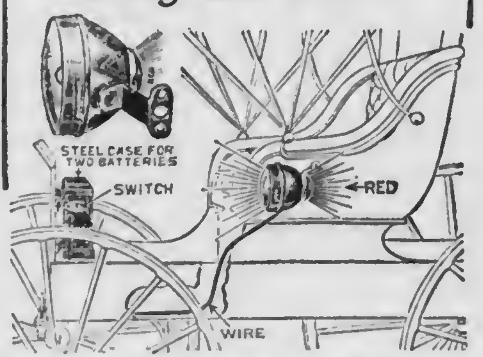
Allegany Co. (NW).—Perhaps 90 percent of our wheat was out, but the damage was slight—about 6 percent. Corn, oats and hay were not damaged much. Some cut hay hurt a little.—John McGill.

Montgomery Co. (C).—Approximately 50 percent of our wheat was out and this was damaged 25 percent. No damage to corn. Late potato planting delayed. Those planted look good. About 25 percent of the hay was cut when the rains came. Good crop, but delayed harvest will mean some loss.—Fred J. Van Hoesen.

Delaware

Newcastle Co. (N).—About 85 percent of the wheat was in the field and 25 percent was lost and the remainder injured. Oats will shatter some. Corn prospects excellent. The early potato crop is light. Considerable hay was on the ground and this is damaged.—R. O. Bausman.

Sussex Co. (S).—Forty percent of our wheat was out and 80 percent of this was damaged. Oats were hurt badly, but the corn escaped with little damage. Potatoes are below normal.—M. C. Vaughn.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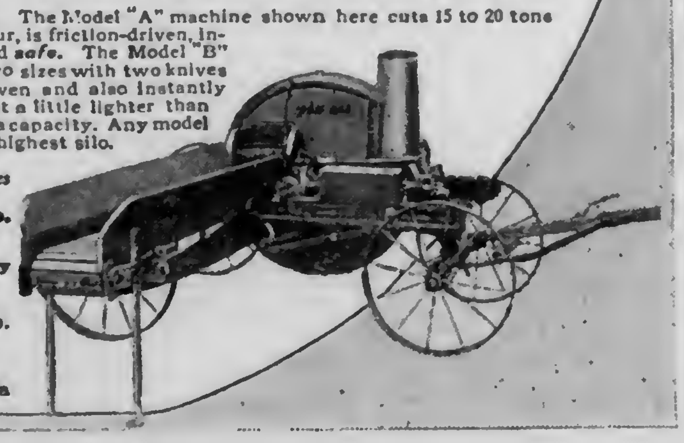

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THIS is the cutter and silo filler you have been waiting for. Like a pair of shears, it cuts sharp and clean—cuts any crop such as corn, alfalfa, peas, oats, etc. Cuts fine—avoids air spaces and spoilage. Saves power and absolutely prevents clogging by combining the cutting, throwing and blowing on one wheel. The shear-steel knives can be easily removed and sharpened—another feature that *saves power*.

Made extra heavy throughout, it runs as steadily as a dynamo, and stands the hardest usage for many years. Manufactured for over 20 years in our Canadian plant, these machines have been the standard of threshers who haul them about the country and give them more hard service in one year than the average farmer would ever give them.

Made in three sizes. The Model "A" machine shown here cuts 15 to 20 tons of green corn per hour, is friction-driven, instantly reversible and *safe*. The Model "B" machine—made in two sizes with two knives or three—is belt driven and also instantly reversible. It is built a little lighter than Model "A" and has less capacity. Any model will elevate into the highest silo.

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HORTICULTURE

HARVESTING EARLY FRUIT

By J. P. STEWART

The harvesting of the early apples and peaches is already upon us. By the time this reaches many of our readers they will have completed their harvesting of Yellow Transparent and Oldenburg apples, and their Greensboro and Carman peaches. For those fortunate enough to have any important quantity of any of these fruits this year, it has been a very satisfactory season. The chief objection so far has been that the supply ran out too soon. That, however, is usually the case when the prices are satisfactory, as it is the chief contributing cause.

Brussels Sprouts Showing First Class Culture

Some losses as usual were experienced by not picking at the really best time. This is not always easy to do. The Transparent for example requires close watching in its later stages to prevent its becoming too mature on the tree. It should be left as long as possible, in order to secure as much size as possible, but its fruit must not be permitted to become even slightly yellow on the trees, unless the market is very close, as it bruises very easily anyhow, and all the bruises received after any yellow color develops turn black over night. This variety also becomes mealy almost as soon as it gets yellow, which makes it practically worthless from the marketing viewpoint, altho it is still good for sauce and pies, and this is the chief value of this variety anyway.

The Oldenburg or Duchess is not quite so particular about the promptness of its picking, and one has the red coloring to assist in determining the proper time. This variety attained unusually good size this year, wherever it was properly cared for. This result, however, was chiefly due to the abundant rains in the latter half of July. This variety deserves wider planting as it comes into bearing early and also ripens at a time when there is little competition. Incidentally, it has made more money for many growers in Western New York than anything else they have.

The early peaches also require close watching to avoid over-maturity and its attendant increase in rot. They should be picked as soon as they become rather thoroly colored and before any softening occurs, except possibly in occasional specimens. Both the Carman and Greensboro should be picked over more than once.

Thinning

It is still time to do some thinning, and this is likely to pay well this year wherever the trees are beginning to show signs of overloading. It enables one to get rid of a lot of defective and undersized fruits, which gives the remainder a much better chance to become really first-class. It also saves important time at the regular picking. The York Imperials are showing urgent need of thinning in some parts of the Cumberland Valley this season. The Black Twigs are also carrying an unusually heavy load in some localities, a condition which is very unexpected in that variety. The Grimes and Jonathans are also showing up pretty well in some parts of the Valley, and there seems to be a big demand in sight already for these two varieties especially.

Pruning Inquiries

We have had some inquiries lately on the advisability of immediate pruning of young apple trees, four to six years old, which are stated to have been neglected for the past two years on account of the scarcity of labor. Without seeing the trees, I would venture the opinion that they were probably rather better for the neglect in this particular, as the pruning of most young apple trees is likely to be overdone rather than underdone, especially during the ages mentioned and by those who are aware of the general need of pruning. In other words, people with a well-developed pruning idea usually have considerable difficulty in letting an apple tree grow up, after they have been shaping it to suit themselves for the first two or three years. The result is that both the size and earliness of bearing are checked by the continued pruning beyond that really needed to develop a proper framework.

Too many people also aim to develop a spreading habit of growth in the young tree, similar to that which comes naturally after the tree comes into bearing.

This of course is likely to develop into too much spread in such trees after bearing begins, and the policy may then have to be reversed in order to get the trees off of the ground, as well as to enable them to carry their loads more comfortably and with less breakage. In any event, I would not do any more pruning than is really necessary in trees of the age mentioned, and I would prefer to confine it to the dormant season, because the tendency is always to take too much out when pruning with the foliage on.

The old notion of pruning in summer to increase fruitfulness and in winter to stimulate growth is also cropping out now and then in our correspondence. Our own practice is to simply disregard this supposition entirely, as the definite evidence back of it is altogether too scant to warrant consideration, and most of what we have is against the soundness of the idea. It is very difficult to get rid of a plausible statement of this kind, however, and it will probably continue cropping out as long as we have people working and writing on the general problem of horticulture.

A FEATHERED PEST

The other morning I was wakened by a steady "drop, drop" on our shed, tin roof. Upon looking out of the window I saw a large black bird, bigger than a robin, pulling the little green apples off the tree that overhangs the building, and letting them fall to the roof with evident enjoyment at the mischief he was doing. This was the latest exploit of the Purple Grackle, a bird that is an intolerable nuisance in this part of the country. Most farmers are acquainted with this cousin of the crow—a good sized black bird, with a greenish-purple head and a wise look in his yellow eye. He has a long diamond shaped tail to aid him in aerial maneuvers, and a loud "tchk, tchk" by way of conversation. The grackle does a great deal of damage, and has but few redeeming features.

Here are some of the things I have seen the grackle do on my own farm: Pull corn, eat cherries and berries, eat birds eggs and young birds, and pick holes in ripening apples. I have also known them to follow the plow for white grubs, and to eat grasshoppers—points in their favor, but not enough to counter-balance the amount of damage they do.

Last year they were very numerous here about. A neighbor had a large field of corn badly damaged by the birds. They got into a large white cherry tree of mine just before the fruit was ready to pick and stripped it completely, carrying the cherries away, presumably to their nests. This year they did not bother the sweet cherries much, but a flock of young ones, guided by a few older birds, got in the pie cherries, and would have made short work of the crop if I hadn't been ready for them. In the fall, the grackles assemble in large flocks, preparatory to their journey South for the winter. I have known one of these flocks to descend on my apple orchard of large trees, and in a few minutes do a considerable amount of damage by pecking holes in the fine fruits that grow in the topmost branches. Their egg eating habits are not the least of their faults. In front of our house are two large maple trees, in which several robins have built their nests. Repeatedly, after a regular row in the branches, I have seen grackles fly out of the trees, hotly pursued by the irate robins, and have found broken robin's eggs on the ground afterward. Pretty conclusive evidence of what was going on.

James Whitcomb Riley has something to say about blackbirds which suggest a remedy for our friend, the enemy:

"You can hear the blackbirds jawin' as they foller up the plow—
Oh, they'r bound to git their breakfast, and they'r not a-carin' how;
So they quarrel in the furries, and they quarrel on the wing—
But they'r peacable in pot-pies than any other thing:
And it's when I git my shotgun drawed up in stiddy rest,
She's as full of tribbelation as a yellerjackets nest;
And a few shots before dinner, when the sun's a shinin' right,
Seems to kindo'—sorto' sharpen up a feller's appetite!"

—R. L. Scharring-Hausen.

INCREASE YIELD OF CANTALOUPES

It is expected that cantaloupes will sell for high prices this season because the general public seems to be demanding the delicacies such as asparagus, strawberries, cantaloupes, peaches, etc. Without a doubt the most economical way to increase the yield of cantaloupes is to broadcast about one hundred pounds of nitrate of soda at the last cultivation. It will help to give the vines a strong and sturdy growth so that blight will be held off at least a week longer than it otherwise would be and the yield will be larger and of higher quality.

SQUASH FOR WINTER USE

It is generally claimed that the most excellent "pumkin" pies obtainable are made from Boston Marrow squash and not from pumpkins. It so happens that Boston Marrow squash can develop in much less time than is required by pumpkins. In the vicinity of Philadelphia that variety of squash may be planted without delay.

Manure spread on plowed land and worked into the soil by cultivation gives the best results. It is advisable to disk before plowing, after spreading manure, in order to mix it more thoroly and evenly with the soil. As a rule, the plowing under of the manure should be rather shallow since deeply turned manure may not decay properly and tends to produce a loose dry seed bed.

INCREASES IN FREIGHT RATES ARE INEVITABLE

Furthermore, the Railroad Administration already has its own troubles in handling and getting ready for increased traffic, while all signs point to crop movements this Fall which should be the BIGGEST EVER.

EVERY DEALER AND BUYER who is wise will take in needed materials now as rapidly as possible.

THE FARMER who is wise will do the same.

Buying Agricultural Lime for Fall Use and For Early Delivery NOW will save money and effect an economy on the next crop which needs lime for its best yield.

Warner's "Limoid" (pure Cedar Hollow hydrated lime) can be stored in any dry place without loss.

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Smash the Biggest Cost

IT pays to feed silage, and the less silage costs the more it pays. Filling the silo is the biggest cost. By the use of International ensilage cutters farmers get the most out of men, power, horses and time. There are five sizes — one of which you can use with profit. On every size there is every adjustment and convenience needed for quick, economical filling.

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Every silo owner needs a silo filler of his own just the same as he needs a plow, planter, mower, or binder of his own. It pays.

The service that goes with every International implement contributes no little toward the prestige and popularity of the line. It is always alert and prompt, resultful and intelligent.

Fill your silo cheaply — fill it well. To do so buy an International ensilage cutter. There is an International dealer nearby who will show you the various types. Or, write the address below and full information will be sent.

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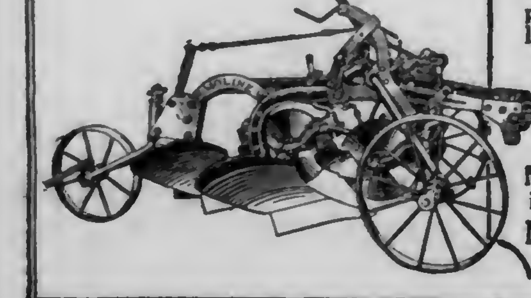


YOU get real satisfaction from your tractor and a real job of plowing when you use this Moline Plow. It has improved positive power lift device which saves power, time, and enables better work to be done. To raise the plows pull the cord until the power lift lever locks, and the plows are raised without further attention. If you want to raise your plows, just an inch or two or any intermediate distance, to relieve your tractor or clear an obstruction, you can do so by a slight pull on the cord. This is the only lift on which you can change the plowing depth without raising the plow out of the ground. Just one of many features which will make your plowing easier and better. See your Moline Dealer or write for full information.

Moline Plow Co., Moline, Ill.

POULTRY

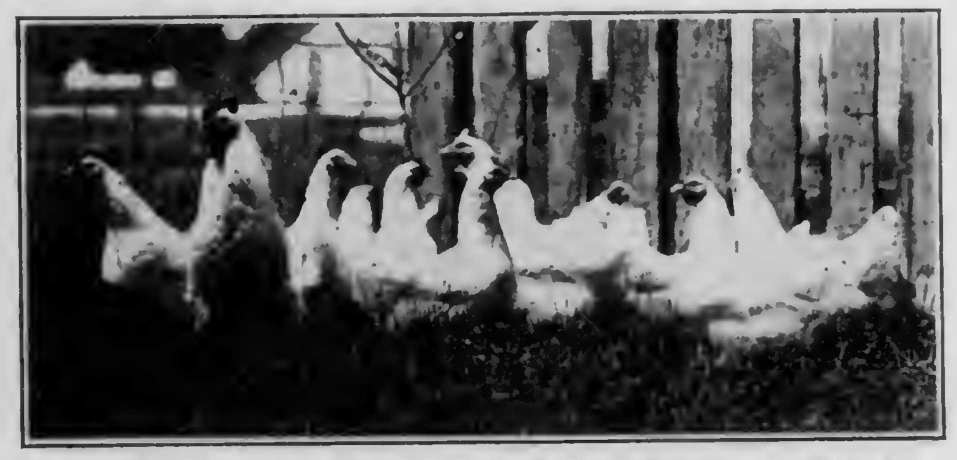
POULTRY NEED GRIT

In the winter hens can only find the grit that is supplied in their houses by the poultryman and it must be furnished to keep them in health. Even if oyster shells are supplied to furnish the lime for egg shells, the grit is almost as necessary. Hens with access to oyster shells will not eat as much grit but they should have it just the same as the shells are not hard enough to act as a grinder for the food the birds eat.

On some farms fine gravel can be procured and this makes a satisfactory substitute for the commercial grit. Even if the fine gravel is used on the floor of the house it pays to keep a hopper of it filled to insure the hens a liberal supply. Did you ever see a flock of hens that had lived in a house several weeks without any grit? Then place a hopper of grit in the house or pound up crockery where they can pick it up. The hens will leave the finest corn or mash to eat that grit because their instinct tells them it is necessary to their well being. A great deal can be learned about hens by studying their likes and dislikes of various kinds of food and their appetite for grit proves its worth in the ration.

Little chicks need grit to grind their feed and it should be supplied before they receive any feed. We like to use grit for chicks that is not too fine or sharp as we believe some of the commercial grit injures the digestive tract and helps to cause bowel trouble. Clean sand or a few shovels full of garden soil containing fine stones will be good to furnish grit for young chicks. While little chicks need grit they do not need to be stuffed with the commercial grit which is too sharp and a few of the bits of fine stone which they pick from the sand and earth seems to give them plenty of grinding material. Not all of the commercial chick grit is too sharp and fine for satisfactory use.

When grit is furnished from the gravel on the farm it pays to gather a few barrels of the material before the heavy snows arrive and not use up the supply at hand and then wait for a thaw before filling the grit hoppers. Hen are under unnatural conditions in the winter and they need plenty of grinding material especially when they are being forced for eggs. To insure the best egg production the hen's digestive system must be able to handle a large amount of food. It must be properly assimilated to build up the bird's body and produce eggs at the same time. We do not give grit to hens just because they like to peck at it. We do not use grit like we used china eggs in the nests just because the other fellow did it. There is a reason for grit in the ration. The hen must grind her food and if the grit is not there she can only do a very poor job of grinding.



It Requires Quality in the Flock to Pay Profits With Present Feed Prices

POULTRY PROFITEERING

I believe I am voicing the general opinion of poultrymen when I say that, as a rule, we agree with A. J. Bradley's statements in July 19 issue. I used to keep poultry and huckster on the street market, but I quit last season when I figured my profits for a long, hard, forenoon's work and found that I had just 90 cents more than the dealer right here at home would have paid me for the same stuff. Besides the forenoon's work for myself and my horse, I had put in nearly another half day preparing my stuff and practically thrown in a lot of vegetables.

I suppose the wealthy ladies who criticize prices so severely think "What is time to a country woman, anyway?" but the multiplicity of things we do when we're not going to market looks almost as important to me as leading a white poodle around by a pink ribbon or riding all over the country in a touring car. Any how I came home, figured up my wealth (?), called the nearest poultry dealer and closed the sale of every hen I had over the telephone in about two minutes.

And I haven't owned a chick since. This is, or has been, a poultry producing region, but practically every one is following Mr. Bradley's plan of close culling. For some time my father has kept just five hens. They furnish us with eggs and none of us care for chicken.

Every farmer knows that the stories we read of 50 or 100 or 200 hens living on the waste about a farm are either the product of the imagination of people who never saw a farm or else they are lies told deliberately and with a purpose. Obviously the manager of any farm where enough grain, etc., to feed 50 hens, is scattered about, must be criminally wasteful. Again, where would even one hen find any waste in winter with the snow several feet deep?

We, too, noticed the general reluctance of the purchaser to pay just a living price for eggs, and we also noticed that the same people cheerfully paid $25 for a very inferior-looking pup. It is self-evident that the city consumer must be educated before he will develop any realization of the value of farm crops and I know of nothing more highly edifying and of greater value to him than doing without or producing them himself for awhile. In no other way will he be so likely to truly appreciate them, and I believe his opportunity is coming.—E. M. A., Chautauqua Co., N. Y.

WHEN IS AN EGG FRESH?

According to the Pennsylvania Board of Chemists a fresh egg is one that is understood to have the following qualities.

Its white is capable of whipping well; in cooking it can be satisfactorily poached or soft boiled; it has not absorbed foreign disagreeable odors; its embyro shall not have developed appreciably; the yolk should be fairly stiff and well rounded, and the white should not be watery and the chalaza shall be well defined.

Eggs held in the warmer portion of the year lose their quality of freshness rapidly. Even when kept in a cool room they lose their quality of freshness in about three weeks. With present high prices of eggs it is only fair that the purchaser who asks for and pays for fresh eggs is entitled to receive them, and it was for this purpose that the Fresh Egg Law was enacted at the last session of the Legislature. The law will be strictly enforced on the above interpretation of what is a fresh egg.

POULTRY APPROACHING NORMAL

The Pennsylvania Department of Agriculture reports the number of laying hens, on July 1, at 96 percent compared with the usual number, as against 89 percent one year ago. The number of spring chicks is estimated at 98 percent compared with 89 percent one year ago.

Much complaint is raised because of the high price of feed; on the other hand, the price of poultry and eggs is much higher than under normal conditions. Like all other farm operations, the production of poultry and eggs is a business proposition and requires economic buying and use of feed, as well as in the sale of the products. Farmers are figuring now.

DOES IT PAY TO FEED HENS IN SUMMER?

Does it pay to feed hens in summer? Many farm flock owners do not think so. A Missouri farm woman had her poultry flock on extensive range and she believed in letting them scratch for a living during warm weather. From a flock of more than 100 barred rock hens she was getting from one to five eggs a day during the last of May and the first of June. Many of these eggs had green whites and were considered unfit for food. She called upon her experiment station to know how to prevent green whites in eggs. It was recommended that the hens be given a liberal ration made up of ten parts corn, five parts oats, three parts bran, three parts shorts and one and one-half parts meat scrap. She started feeding this ration on June 10. Her record of egg production is as follows:

June 1 to 11, 1 to 5 daily; June 12 to 19, 15 to 52 eggs; June 19 to 27, 57 to 90 eggs. Her daily average from June 11 to 27 was 51 eggs.

Ralph K. Mulford, Jr.; on Daddy's Car day of Race

Same tires after the race

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FIRST in Ten-Mile Special. Time, 5 min., 24 1-5 sec.
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Ralph Mulford broke another record on Braender Tires, winning First Race, and Second in second race, and leading in third (100 mile) race up to last six laps when forced out on account of engine trouble.

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Ask your dealer for them. If he cannot supply you, write the nearest factory branch, or
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who are the wholesale distributors and they will tell you where you may procure them.
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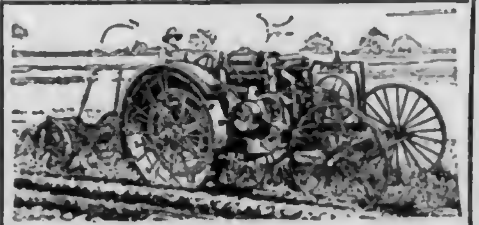

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For Best Price Send Old Bags to Knott
In business 30 years and absolutely dependable. You get a square and honest deal from this concern. We pay top market prices and send check or pay cash immediately on receipt of goods. Write us for price list or bring your bags to us yourself. Phone us, if desirable, and compare our prices with others.
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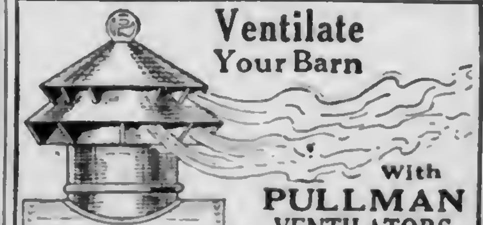

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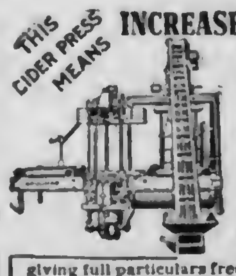

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Lamb is in Season

Dressing and Preparing Cuts of Lamb and Mutton for Cheap Meat Supply

Mutton and lambs are not nearly so popular meats with farm families as pork and beef. One of the reasons ascribed for this is that dressing sheep is not so easy; this, however, seems hardly tenable, for scraping the hogs can scarcely be more pleasurable than removing the sheep pelts. Doubtless the reason is the lesser extent of the sheep industry and the prejudice of most of us against the "muttony flavor" of sheep meat. And this prejudice had its origin in not knowing how to dress a sheep carcass properly and also in the cooks' carelessness and ignorance about preparing the sheep meat for cooking. Also probably some of the prejudice had its rise, with reason, in the use for mutton of the wool breeds so largely in the earlier days of our sheep raising industry. The exceedingly oily character of the skin of the wool breeds may possibly affect the flavor of the body fat, tho this is by no means demonstrated.

But it is quite certain that latter day mutton from our mutton breeds, when properly dressed and prepared for cooking, makes very good eating. And the yearling and spring lamb meat is especially delicious. We farmers ought to get back to eating more sheep meat of our own raising. There is lots of land in our section that is better adapted to sheep than to any other kinds of live sock. And surely if folks in the days of Abraham and Isaac, with their extremely primitive tools for "preparing the kid," could run out and get one ready with the same casual concern with which we run out and grab a chicken when we see company turning in for dinner (that's the way the Old Testament makes it appear, doesn't it) why, we ought to be able to kill and dress a lamb or a sheep now and then for our own eating.

Dressing the Sheep

If husband does not already have Prof. Coffey's "Productive Sheep Husbandry," which tells all about dressing and cutting up the carcass, as well as about feeding and breeding the sheep, you would better see that a copy gets into your family library. There are some interesting notes in the last chapter also for your information about use of the different cuts. The Pennsylvania Farmer will send you the book for $2.50.

Briefly, it may be said here that a sheep which you intend to kill for eating should be fasted 18 hours or so before killing, but should be allowed plenty of water; and it should not be allowed to get excited, and should be handled with reasonable care to prevent body bruises. Such carefulness conduces to thoro bleeding and more rapid cooling of the internal organs, thereby lessening the danger of cutting them. The fasting avoids fermentation of food in the stomach, which may have occasioned some of the unpleasant flavor that used to be associated with mutton. The fleece should be dry and reasonably clean; it is usually handier to dress a sheared carcass. However, for some of the trade it is customary to leave the fleece on spring lambs, taking out the viscera and drawing the caul fat (abdomenal fat) over the opened part of the carcass, then wrapping muslin and burlap about the body to prepare it for shipping.

Cutting Up the Carcass

In a spring kill the carcass while cooling should be carefully protected from flies by wrapping loosely with cheese cloth; it may be hung to cool in the cellar. For home use, the carcass is generally divided into halves, the aitch bone being cut thru, and the carcass sawed down the center of the backbone. Then the halves are divided thus:

Breast.—This includes the flank, plate and front shank. It is the cheapest of the meaty portions, and is used by the housewife chiefly for stews and fricasses. To make this out the knife is started at the udder and run straight forward to just above the elbow joint, then the excess fat and the thin tough membrane on the inside of the flank are removed, the ribs are cracked, and the fore shank is sawed thru in one or two places.

Home-Making Department Girls at Fredonia School, Mercer Co., Pa.

Leg o' Mutton or Lamb.—The point at which the leg is removed depends upon the size of roast desired; usually it is cut off on a line parallel with the ribs and running thru the backbone just where it begins to bend upward for the rump. "American trim" or "plain trim" is obtained by cutting off the shank at the stifle joint, then skewering the strip of shank meat over the end of the joint. "French trim" consists of sawing the shank off just above the hock, then scraping the meat off the bone for an inch from the end. A leg roast for slicing neatly is made by removing all the bones and tying the meat in a roll. All excess fat and thin flank muscles, as well as the tail bones should be removed to make a neat looking roast, both in the case of the rolled roast and the leg 'o lamb.

Loin and Saddle.—Of course the most savory part of the carcass is the loin, which extends from the leg to the next to the last or the twelfth rib. But there is not a bit more nutrition in it than in the breast. The tenderness and the savor of the loin naturally make it the most expensive part. The choicest chops come from the loin; to get them out the kidney fat is removed, and the chops are cut across the loin about three-fourths inch thick. The loin also makes a delicious roast, but is quite expensive because of its quality and the fact that the lean meat is not so thick as on the leg or the shoulder. To prepare a loin roast, the joints of the backbone are cut thru with a cleaver or are removed and the meat tied in a roll. Boneless rolled chops are made by slicing such a roll and skewering the slices to keep them in shape while cooking. A "saddle" of mutton or lamb is obtained by taking the loin out whole without halving the carcass down the backbone.

Ribs.—A rib cut extends from the last to the fourth or fifth rib. This cut is used for chops and roasts. Rib chops are cut one rib wide. Rib roasts are obtained the same as loin roasts, but a crown roast is one in which the meat is rolled back from the lower ends of the ribs, the spine projections are sawed off and the two cuts are tied together. Then the ribs are bent backward and allowed to stand up in the roasting pan. Sometimes the house wife ties cloth over the ends to keep them from getting too brown while the meat is being roasted.

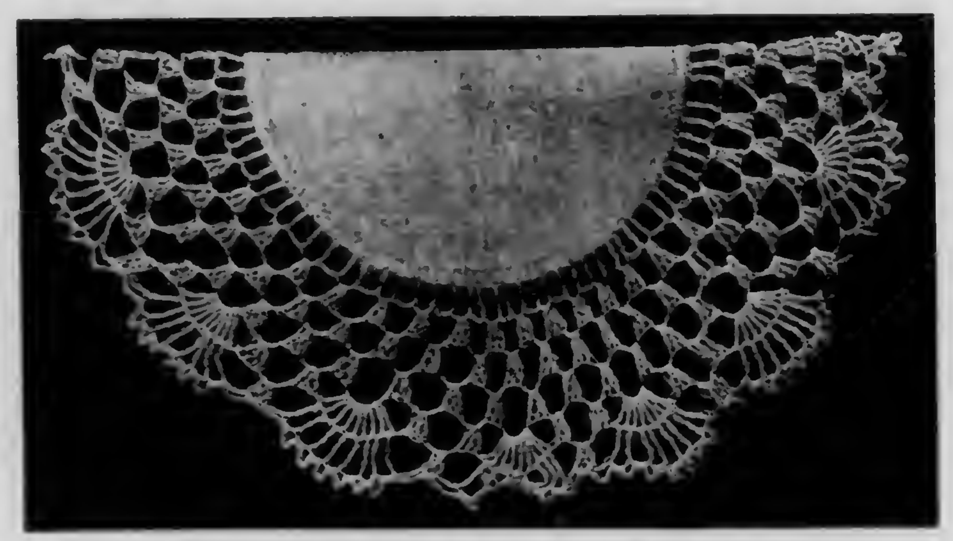


Plate Doily Design Easily Made

Shoulder.—The shoulder is largely used for stews and fricassees; also chops are cut from the side next to the ribs or from the lower part where the shank was taken off. To get a roast from the shoulder, the neck is trimmed off square, then the joints of the backbone are broken with the cleaver so that the piece will lay flat in a pan; or else the bones are all taken out, and the meat is rolled the same as for a loin roast.

Cooking Lamb

There is a thin, tough, paper-like, pinkish membrane between the entire sheep carcass and the pelt, which must be removed from each cut when the cook is preparing it for cooking. This membrane, called the "fell," is strong in flavor, and is doubtless the cause of much of the prejudice against mutton because the unititiated cook leaves it on.

A "Saddle" Roast.—Trim off the skin above referred to, and the superfluous fat. Cut off the ends of the ribs and remove the spinal cord and the veins along the back. Wipe and rub the inside with salt. Roll the flank under on each side, and fasten it in place with a few stitches. Dredge the meat with salt, pepper and flour, put it in a baking pan with the inside up in order first to cook the fat quite thoroly; baste and dredge several times. Then when the fat is crisped quite brown, turn the saddle and roast until the meat is thoroly done; better keep a buttered paper over the top until the meat is nearly done to prevent the top from getting too brown, dry and hard before the inside is thoroly done. To carve a "saddle," cut long slices parallel with the backbone, then slip the knife under and separate the slices from the ribs; divide them and serve with some of the crisp fat.

Rolled Loin Roast.—Take out the ends of the ribs, lay some good well-seasoned bread stuffing in the inside of the loin, then roll it up and skewer or tie it to keep it rolled until it is roasted. To serve, cut the slices at right angles to the backbone.—Harriet Mason.

Treatment of other "cuts" and directions for cooking will be published in an early issue.

ANOTHER "PAINTED WALL" IDEA

I read with pleasure in the Pennsylvania Farmer recently Harriet Mason's description of a painted wall she has seen. I hope to try out the idea of blending a background that way some time this fall. It is new to me, and the idea is very attractive.

A friend of mine has a painted wall that she holds as too choice for the care of any one except herself. When she moved to another city she would not rent the room where the painted wall is, altho she rented all the rest of her big, double house.

This truly choice wall was first given a coat of light, dull tan paint, right on the rough plaster. When this was dry a stenciled design of much darker dull tan was painted on—rose vines and leaves, but the roses were only lightly touched with old-rose and pink. Then, an artistic friend of the family added hand touches here and there—another spray, a leaf or two, a bit more shading to a stenciled rose or another dimly sketched rose bloomed near a hand-touched, stenciled sister. Every corner of the border (which at the corners ran up onto the ceiling in graceful sprays) was just a little different from the other corners, made possible by the hand-sketched sprays, leaves and roses added to the conventional stenciled design.

Just back of where the piano was to be placed, and running down well toward its top, on the side wall is a faintly sketched and dimly tinted lyre, and back of this lyre, which is in dull tan like the rose vines, is a girl's figure, so faint that one hardly sees it just at first glance. The girl's dress is faintest blue her

hair the dull tan of the rose vines, her eyes the faintest blue, and altogether she's just the faintest misty suggestion of music appearing before one's surprised sight.

The wood work in this room had been painted several times so paint was again used—two soft, dull shades of tan; the darker shade, hardly more than two shades different from the lighter one, is used in panels and other touches where the cut of the woodwork will take another shade decoratively.

The above may all sound difficult, or too elaborate, but really, my friend tells me it was nothing of the kind. Her husband did all the conventional painting, and the man who added the touches merely had the ability to do sketchy, free-hand painting. He had the stenciled design for a guide, and I'm not sure that I, who am not the least bit an artist, could not have done something similar. The corners, differing from each other, run up on the ceiling here and there, an an odd rose or a vine added here and there, gave the effect of hand-painting. The misty music lady could be left out, and would much better be left out unless she can be done very daintily indeed.

Some of our "hand painted" china dishes are only hand touched, the first design being conventional, and put on in the usual manner of decorating flowered dishes. I have a celery tray that I'm almost sure is done that way. But the effect is hand-painting, and expensive looking.—Mrs. Nina Wallace. Broome Co., N. Y.

STAINS AND HOW TO REMOVE THEM

Blood and Meat Juice.—Use cold water; soap and cold water; or starch paste.

Bluing.—Use boiling water.

Chocolate and Cocoa.—Use borax and cold water; bleach if necessary.

Coffee and Tea. (Clear.)—Use boiling water; bleach if necessary. (With Cream.)—Use cold water, then boiling water, bleach if necessary.

Cream and Milk.—Use cold water, then soap and cold water.

Eggs.—Use cold water.

Fruit and Fruit Juices.—Use boiling water; bleach if necessary.

Grass.—Use cold water; soap and cold water; alcohol; or a bleaching agent.

Grease and Oils.—Use French chalk, blotting paper or other absorbent; or warm water and soap; or gasoline, benzine, or carbon tetrachloride.

Iodine.—Use warm water and soap; alcohol; or ammonia.

Ink.—Try cold water; then use an acid or bleach if necessary.

Iron.—Use oxalic acid; hydrochloric acid; salts of lemon; or lemon juice and salt.

Kerosene.—Use warm water and soap.

Lampblack and Soot.—Use kerosene, benzine, chloroform, ether, gasoline, or carbon tetrachloride.

Medicine.—Use alcohol.

Mildew.—If fresh, use cold water; otherwise try to bleach with Javelle water or potassium permanganate.

Paint and Varnish.—Use alcohol, carbon tetrachloride, chloroform, or turpentine.

Perspiration.—Use soap and warm water; bleach in the sun or with Javelle water or potassium permanganate.

Pitch, Tar, and Wheel Grease.—Rub with fat; then use soap and warm water; or benzine, gasoline, or carbon tetrachloride.

Scorch.—Bleach in the sunshine or with Javelle water.

Shoe Polish. (Black). Use soap and water; or turpentine. (Tan.) Use alcohol.

Sirup.—Use water.

Stove Polish.—Use cold water and soap; or kerosene, benzine, or gasoline.

Vaseline.—Use kerosene or turpentine.

Water.—Steam or sponge the entire surface of water-spotted materials.

Wax.—Scrape off as much as possible. Use French chalk, blotting paper or other absorbent with a warm iron; or use benzine or gasoline. If color remains, use alcohol or bleach.

Send to the U. S. Department of Agriculture, Washington, D. C., for Farmers' Bulletin 861, "Removal of Stains from Clothing and Other Textiles."

HOW TO WASH CORDUROY

Corduroy is a kind of cotton velvet which may be washed providing it is not rubbed, squeezed or ironed. If it is made up at home, stitch the seams with a loose stitch to prevent puckering when washed. Before laundering babies' coats or other lined garments, loosen the lining at the bottom to avoid bagging. Use a solution of mild soap, or for dark colors which may streak or fade, a solution of soap bark. Souse the garment up and down in the soapy water, changing the water as it becomes soiled. Rinse in several clear waters until no more dirt and soap come out. Hang the garment up dripping wet and so that it will dry in the shape in which it is worn. Dry in the wind if possible. When dry, brush briskly to raise the nap.

HOW TO WASH KNITTED ARTICLES

Sweaters, scarfs, and other knitted or crocheted articles often lose their shape when cleaned unless special precautions are taken. Work as follows: Measure the article. Use lukewarm water and soap solution. Wash the article by squeezing rather than rubbing and keep it under water as much as possible. When lifting it, keep the hand under and put it into a pan. Rinse until the last water is clear. Squeeze out the water either with the hands or by putting thru the wringer, keeping the hand under the garment to prevent stretching from the weight of the water. Put thru the wringer several times, changing the folds to take out as much water as possible. Place on a covered table and stretch or pat into the original shape and size as shown by the measurements. If desirable, it may be pinned or fastened in place by thumb tacks.

Is your tractor lying down on the job? A homemade stethoscope, consisting of a rubber tube and small funnel, may help you locate the knock.

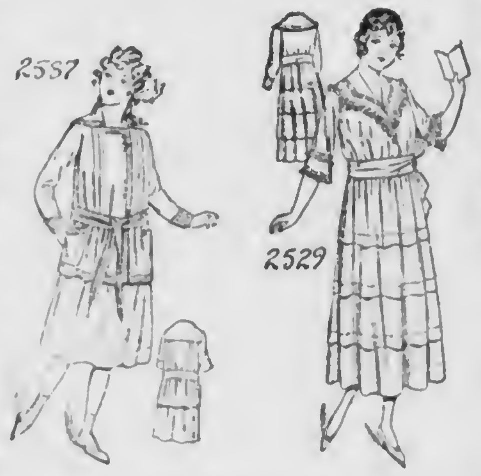
PATTERN CATALOGUE

Send 10 cents in silver or stamps for our Up-to-Date Fall and Winter, 1919-1920 Catalogue, containing 550 designs of Ladies', Misses' and Children's Patterns, a concise and comprehensive article on dressmaking, also some points for the needle (illustrating 30 of the various, simple stitches) all valuable hints to the home dressmaker.

PENNSYLVANIA FARMER PATTERNS

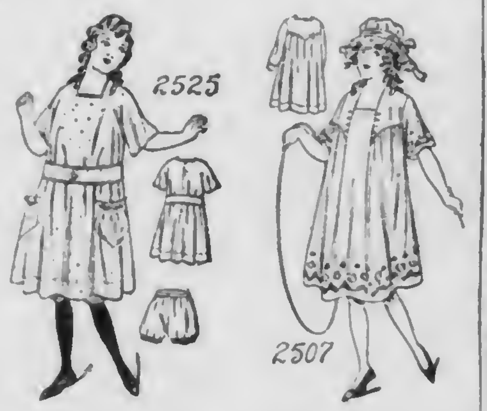
Give figures and letters of each pattern exactly as printed at beginning of each description or we will not be responsible for correct filling of orders. Give bust measure when ordering waist patterns, waist measure for skirt, and age for children's patterns. Address Pennsylvania Farmer, 261 S. Third Street, Philadelphia, Pa.

2587.—For School or General Wear.—Comfortable clothing is a boon to the growing girl, and these coat blouse dresses are very becoming and as good for woolen as well as for wash materials. The skirt of the dress is a two-piece model. The blouse closes at the left side, has a square neck opening, and may be finished with a long or elbow sleeve. One could combine materials in this model. Plaid or checked suiting for the skirt with serge for the blouse. Or have a blouse of khaki and a brown gabardine skirt.—The pattern is cut in 4 sizes: 8, 10, 12 and 14 years. Size 12 requires 4½ yards of 40-inch material. Pattern 10 cents.



2529.—A Pretty Frock.—Net over organdie, or dimity, organdie, batiste, lawn, crepe, washable silk, foulard, charmeuse, voile or marquisette, all are nice for this style. The waist is made with surplice closing. The sleeve may be gathered to the cuff, or finished in short length, loose and flowing. The skirt is joined to the waist. A girdle or sash of ribbon forms a suitable trimming. The pattern is cut in 3 sizes: 16, 18 and 20 years. Size 18 requires 5⅜ yards of 36-inch material. The skirt measures about 1⅞ yard at the foot. Pattern, 10 cents.

2525.—Comfortable Dress.—This will make an ideal play or school dress. The bloomers take the place of petticoats. The sleeves are cut in one with the back and front. Gingham, galatea, percale, chambray, seersucker, voile, repp and poplin could be used. The bloomers may be of the same material. Pattern is cut in 5 sizes: 4, 6, 8, 10 and 12 years. Size 10 requires 3 yards of 36-inch material for the dress, and 1⅞ yard for the bloomers.—Pattern, 10 cents.



2507.—Dainty Frock.— Bordered goods, such as embroidered voile or batiste and flouncing, are just the thing for this model. The dress slips over the head, but additional opening may be made at the yoke fronts. The sleeve may be finished in wrist or elbow length. The pattern is cut in 4 sizes: 4, 6, 8 and 10 years. Size 8 requires 3½ yards of 40-inch material. Pattern, 10 cents.

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PENNSYLVANIA FARMER
261-63 S. 3rd. St., Phila., Pa.

Markets

PHILADELPHIA PRODUCE

Philadelphia, Pa., Aug. 4, 1919.

There seems to be a scarcity of potatoes at the present time and prices are showing quite some advance. There were only about 8 cars of southern potatoes here this morning and these sold at $6.25@6.75 per barrel for the best with field run and potatoes showing defects from $4@5.50 per barrel. No. 2's and culls sold from $2.25@3 per barrel. The supplies hauled in by the nearby farmers are rather light and these are selling at $1.20@1.40 per ⅝ bushel basket for No. 1's with defectives at 90c@$1.10, and No. 2's at 55@75c per basket. There are very few sweet potatoes on the market and the few that have been here have been rather undersized and poor and sold at $8@10 per barrel, with No. 2's at $5@6 and culls at $2.50@3. Heavier supplies of sweet potatoes from southern points are expected within the next few days.

Vegetables

Offerings of string green and wax beans are more plentiful than they were a week ago, but very few of them are showing very good quality and prices are showing a very wide range. Good beans are in active demand at 75c@$1 per ⅝ basket for green. Very few are good enough to bring these prices and most sales are being made at 50@60c per basket with some very poor as low as 25c. Wax beans are in about the same condition, best bringing $1@1.25 per basket very readily, but most are poor and sales range from 50@75c per basket, with some very poor still lower. Bunch beets are not near as plentiful as they were a week or two ago, and prices are higher, ranging from 2½@3½c per bunch. Bunch carrots are also less plentiful and ruling firm at 2@3c per bunch. Cabbage shows a further improvement over the slight advance noted last week, the market now ruling firm at 40@60c per ⅝ basket for New Jersey cabbage and $1.50@2.25 per barrel. The celery market is very dull and draggy with New Jersey stock selling at 25@50c per punch, while the celery hearts sell at 4@7c per bunch. New York state celery is selling at 25@60c per bunch.

Corn is quite plentiful and the market is showing an easier tendency, with best sugar corn now selling at $1@1.25 per ⅝ basket, and white corn at 60@85c per basket. The Pennsylvania crop is now being marketed and this is selling at around $1.50@2.50 per hundred ears. The cucumber market is very abundantly supplied with New Jersey grown cucumbers, which are selling at the low price of 25@50c per ⅝ basket, and cucumbers from points further away do not bring carrying charges. Small cucumber pickles are selling at 75c@$1 per ⅝ basket. Contrary to expectations, the market on egg plants is stronger than it was a week ago, and good plants are now selling at $1.25@1.50 per ⅝ basket, with supplies rather light. The lettuce market has undergone a sharp reaction from the advance noted in these columns last week. The high prices then prevailing had the effect of bringing forward large supplies and today there were 11 or 12 cars of New York state lettuce here in addition to the supplies from New Jersey. The New York state letture sold at $1.25@1.75 per box and $1@1.25 per hamper, while the New Jersey lettuce sold at $1@1.50 per box and 75c@$1.25 per hamper. The supplies of onions are greater than the demand at the high prices that have been prevailing, and it looks as tho onions would go lower within a few days. At this writing Pennsylvania onions are selling at $3.75@4.25 per 100-lb. sack, while some western onions sold all the way from $2.50 up to $4.75 per sack, some stock being very fancy, while others were small and poor in quality, causing the wide range. Pennsylvania and Maryland yellow onions in hampers sold at $2@2.25 per hamper, while white onions brought $1.50@2.50 per hamper. Red onions are meeting a very slow sale at around $1.50 per hamper. New Jersey onions in ⅝ baskets are also lower, ranging from $1.40@1.50 per ⅝ basket for the best, with No. 2's at $1 per basket.

Parsley is not near as plentiful as it was a week ago and prices are firmer and higher, sales being made at $1@1.50 per 100 bunches. Peppers have not been as plentiful this week as they were last, and higher prices are prevailing. Sales are made mostly at 65@75c per ⅝ basket, but these prices should bring out additional supplies, and values may ease off before long. Squash is also more active at 25@35c per ⅝ basket. Tomatoes are showing a wide range in quality, best selling readily at $1@1.25 per ⅝ basket, while poorer tomatoes move slowly at 15@50c per basket. Turnips continue to meet a slow sale, with best yellows about steady at 50@75c per ⅝ basket, poor stock and white turnips moving slowly at 25@50c per basket. Spinach is a very scarce commodity and when here brings good prices, some bushel hampers selling today at $1.75@2 per hamper. Watercress is less active at 1½@2@c per bunch.

Fresh Fruits

The market continues to be amply supplied with nearby New Jersey and Pennsylvania grown apples, which are meeting an active demand when fancy at full former prices, fancy hand-picked apples selling at $1.25@1.50 per ⅝ basket, with other sales of No. 1 fruit at 75@90c per basket, as to quality. No. 2 apples are not quite so active as the No. 1 fruit, but are about steady at 40@65c per basket, while the culls and windfalls are dull and irregular at 15@35c per basket. Very few apples are coming from outside points. There are still a few southern peaches arriving, which are selling all the way from $1.50@4.25 per crate, as to quality and condition. The New Jersey and Delaware crop is increasing in supply every day, and within a few days will entirely dominate the market. At the present time the New Jersey peaches are not showing as good quality as they will later in the season when the late varieties of peaches come on the market. The New Jersey peaches are now selling at $1.25@2 per crate, 40c@ per ⅝ basket and 35c@1 per 16-quart These prices, while apparently low, the quality and character of taken into consideration.

Some New Jersey cantaloupes are making their appearance on the market, there being quite a large number of them here today, with sales ranging from $1.25@2 per ⅝ basket. The supply of Delaware and Maryland cantaloupes is quite heavy and they sold at low prices, ranging from $1.50@2 per standard crate, $1.50@2.25 per jumbo crate, and 75c@$1.15 per pony crate. Today also saw very heavy supplies of watermelons here, there being 82 fresh cars offered to the trade today, with sales ranging from $140@375 per car. Huckleberries and blackberries appear to be falling off in supply and prices are advancing—blackberries selling today at 16@22c per quart and huckleberries at 17@22c per quart.

Poultry

There is a generally lower market in all kinds of live poultry. Supplies have been a little more plentiful, especially live fowls, which are showing the greatest decline. At this writing, fowls are selling at 35@36c per pound. Chickens at 36@40c per pound for chickens not leghorns, while the leghorn variety is weak at 30@34c per pound. There are now quite a few spring ducks in the market which are selling at 32@36c per pound, while old ducks only command 27@31c per pound. Old roosters are about steady at 23@25c per pound.

Eggs

Under the continued good demand, and supplies comparatively light, the market on strictly fancy eggs is ruling firm and active with prices holding about steady at last week's quotations. Under-grade eggs, on the other hand, are rather dull and are moving slowly at from 36@46c per dozen as to quality. Sales of Pennsylvania and other nearby firsts are now being made at 52c per dozen and firsts at 50c per dozen, but it is no hard matter to obtain premiums over these prices for strictly fancy well-known marks of eggs. Western eggs are selling generally at 52c for extra firsts, with firsts at 50c, but like the nearby eggs, the strictly fancy well-known brands of western eggs are bringing premiums over quotations. Southern eggs are very irregular in quality and sell at the wide range of 36@46c per dozen, as to condition and quality.

LANCASTER PRODUCE MARKET

Lancaster, Pa., Aug. 4, 1919.

Lima beans made their first appearance in quantity in market today, and altho quoted at the record price of 50 cents a quart, found a good market. Blackberries were plentiful at 18 and 20 cents per box, but the grade was only fair and business was slow. Peaches were offered in abundance from $2.50 to $5.00 a bushel. Other prices were steady.

Butter and Eggs.—Creamery butter, 70c per lb.; country butter, 65@70c. Eggs, 48@50c per doz.; duck eggs, 50c per doz.; gouse eggs, 10c each.

Poultry.—Dressed old chickens, $1.75@2.50 each; dressed young chickens, 75c@$1.75 each; old live chickens, 28c per lb.

Vegetables.—Corn, 10@40c doz.; beets, 5c bunch; beans, 10@12c ½ pk.; onions, 5c bunch; tomatoes, 10@20c box; green lima beans, 50c qt.; do., dried, 10@15c lb.; cauliflower, 10@15c head; cabbage, 5@10c head; sweet potatoes, 50c ½ pk.; potatoes, 25@35c ½ pk.; do., $1.70@2 bu.; turnips, 15c ½ pk.; spinach, 20c ½ pk.; letture, 10@15c head; rhubarb, 5c bunch.

Fruit.—Plums, 10c box; apples, 15@35c ½ pk.; blackberries, 18@20c box; huckleberries, 25@28c box; watermelons, 85c@$1 each; cantaloupes, 10@15c each; pears, 5@15c box; peaches, $2.50@5 bu.

Grain Market.—Wheat, $2.20 per bu.; rye, $1.50; oats, 80c; ear corn, $1.75. Timothy hay, $37 ton; mixed hay, $35; wheat straw, $15; oat straw, $12.

YORK PRODUCE MARKETS

York, Pa., Aug. 4, 1919.

There was a large supply of all the seasonable produce at the markets with the exception of cantaloupes. This has not made its appearance from the county yet and is reported very low in quantity. The first good home-raised peaches were seen on Friday and Saturday. There seems to be a general decline in all lines of produce outside of butter and eggs. The latter are bringing 47@50c at the markets, while the dealer is paying 55c for whites. The corn situation is especially unpleasant. It is almost impossible to get middlings at all, while all feeds have risen rapidly in price the past several weeks. Now the farmer is receiving for his sugar corn the prices of the last three to four years, 15c to 25c per dozen. If this condition holds during the coming week it seems there can be only one alternative, and that is feed the sweet corn. This makes an excellent feed for all hogs and cattle, producing gains rapidly.

Eggs.—47@55c per dozen.

Butter—Country, 55@60c lb.; separator, 60@70c lb. Milk, 10c qt.

Poultry.—Here again, just about the time the largest amount of poultry is in a marketable condition, a glut is reported and prices fall until the large stocks are in storage. Hens, 25@26c lb.; springers, 28c lb.; dressed, 75c@2 each.

Vegetables.—Potatoes, lower, 15@30c ½ pk.; $2 per bu.; cabbage, 3@8c hd.; lettuce, 3@15c hd.; radishes, 4@5c bch.; onions, 5c bch.; lima beans, 20c qt.; soup beans, 25c qt.; celery, 5@12c stalk; rhubarb, 3@5c bch.; egg plants, 5@15c; beans, 5@10c ¼ pk.; lard, 40@42c lb.

Fruit.—Apples, 10@15c box; 5@20c ¼ pk.; blackberries, 15@20c qt.; plums, 10@20c box; peaches, 10@15c ¼ pk.

Retail Grain Market.—Wheat, $2.50; corn, $2.25; oats, $1.10; rye, $1.65; bran, $3 cwt.; middlings, $3.50 cwt.

Wholesale Grain Market.—Wheat, $2.10; corn, $2.10; oats, 90c; rye, $1.40; bran, $55 per ton; middlings, $65 per ton.

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BALTIMORE PRODUCE

Baltimore, Md., Aug. 4 1919.

Produce.—Potatoes, new, No. 1, $2.50-3 cwt.; do., No. 2, $1.50-2. Cabbage, new, $1-2 crate; do., $5-12 per 100. Lettuce, 50c-$1 basket. Onions, nearby, $2-2.25 basket. Rhubarb, 2-3c bunch. Cucumbers, 25-50c basket. Carrots, 1-2c bunch. Green beans, 60-75c bu.; do., wax, 75c-$1 bushel. Lima beans $2.50-3 bu. Beets, 1-2c bunch. Green corn, 10-25c dozen. Tomatoes 60c-$1 10 basket. Squash 15-35c basket.

Fruit.—Apples, early harvest, $3-4 bbl.; 75c-$1.75 bkt. Blackberries, 16-22c qt. Currants, 75-85c per 8-lb. basket. Huckleberries, 15-20c quart. Cantaloupes, 75c-$1.75 crate. Peaches, $1-1.75 crate. Watermelons, $20-40 per 100.

Butter.—Creamery, western fancy, 66-57c; choice, 55-56c; pound prints, 57-59c. Nearby rolls, 45-46c. Dairy prints, 45-46c.

Eggs.—State, Pennsylvania and nearby, 45-46c; Eastern Shore and Virginia, 45-46c. Southern, 44-45c.

Live Poultry.—Springers, 35-37c lb.; old roosters, 22-23c; old hens, 36-37c lb.; ducks, 22-27c; guinea fowls, 50c-$1 each.

Grains.—Wheat, new No. 1 red, $2.38¾; do., No. 2, $2.35¾; do., No. 3, $2.31¾; garlicky, $2.29¾-2.36¾. Corn, bag lots, No. 3, $2.12 bu. Oats, standard, white, 93c; No. 3 white, 92c. Rye, nearby, $1.75-1.80.

Hay.—No. 1 timothy, $41-42 ton; do., standard, $41-41.50 ton; Light clover, mixed, $38-40 ton. Clover, mixed, $36-39. Clover clear, $32-34 ton. Tangled rye straw, $11.50-13.50. Wheat straw, $9-10.50 ton. Oat straw, $11-13 ton.

Mill Feeds.—Winter wheat bran, $63 ton; brown middlings, $63 ton; white middlings, $73 ton.

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NEW YORK PRODUCE

New York City, Aug. 4, 1919.

Butter.—Easier; receipts, 9,303; creamery, higher than extras, 55¾@56½c; creamery extras (92 score), 55¼@55½c; firsts, 53@55c; packing stock current make, No. 2, 46c.

Eggs.—Irregular; receipts, 12,666; fresh-gathered extras, 54@55c; extra firsts, 51@53c; firsts, 47@50c; state, Pennsylvania and nearby western hennery whites, fine to fancy, 67@70c; state, Pennsylvania and nearby hennery whites, ordinary to prime, 55@66c; state, Pennsylvania and nearby hennery browns, 58@62c; state, Pennsylvania and nearby gathered browns and mixed colors, 52@55c.

Cheese.—Barely steady; receipts, 1,478; state, whole milk, flats, current make, specials, 32½@33¼c; average run, 31½@32¼c; state, whole milk, twins, current make, specials, 32¼@33c; do., average run, 31@32c.

Live Poultry.—Steady. Broilers, 38@40c; fowls, 32c; old roosters, 21@22c; turkeys, 25@30c.

Dressed Poultry.—Steady. Broilers, 31@45c; chickens, 40@43c; fowls, 30@39½c; old roosters, 19@23c; turkeys, 46@49c.

Vegetables.—Potatoes, Jersey No. 1, $5@5.75 bag; No. 2, $2@2.50 bag. Beans, green, $1@1.50 basket; do., wax, 75c@$2 basket. Beets, $1.50@3 per 100 bunches. Carrots, $1@2 per 100 bunches. Cabbage, $3@8 per 100. Lettuce, 50c@$1.75 basket. Tomatoes, No. 1, $1@2.50 box; culls, 20@75c.

Fruit.—Apples, $1@2.75 basket. Raspberries, 10@14c qt.; do., black, 10@12c. Peaches, $2@4 crate. Jersey, $1.50@2 crate. Currants, 7@14c quart. Blackberries, 15@28c quart. Huckleberries, 18@20c quart. Muskmelons, $1@2 crate.

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PHILADELPHIA LIVE STOCK

Philadelphia, Pa., Aug. 4, 1919.

Receipts of live stock for week ending August 2 were as follows:

	Beef Cattle	Sheep and Lambs	Hogs
Total for Week....	2,106	5,076	3,547
Previous Week....	2,793	7,929	4,163

Calves.—Receipts of calves last week were 1,920 head against 1,701 head week previous.

Beef Cattle.—Steers and cows were dull and lower. Supplies were largely of medium and low grades. Calves of fine quality were in fair request and steady. Steers, good to choice, $15-16.50; do, fair to good, $13.50-15; common to fair, $12-13.50; cows, fat, per lb., good to choice, corn fed, 9-11c; fair to good, 7-9c; do, common to fair, 5½-7c; bologna cows, 4½-5½c; calves, extra choice, $20-21; fair to good, $18-19; common, $12-15; heavy, $7-10.50; Tennessee, choice, $14.50-16.50; other southern, $8.50-12.50.

Sheep and Lambs—Desirable grades of sheep ruled steady under light offerings and a fair demand. Lambs of fine quality were firm and higher, but supplies were mostly of unattractive stock, which was dull and weak. Sheared wethers, extra, $11-11.50; good to choice, $9.50-10.50; medium, $7.50-8.50; common, $4-5; ewes, fat, heavy, $9-10.50; spring lambs, choice, $17-17.50; medium, $12-14; do., culls and common, $8-11.

Hogs.—There was a fair inquiry for desirable stock and values generally were steadily maintained under moderate offerings. Quotations for best westerns, $24.50-25; Pennsylvania and Maryland, $22.50-23.

City Dressed Stock.—Demand for steers and cows was slow and the market ruled weak and lower. Hogs of fine quality were firm and held slightly higher. Calves and lambs of choice quality also ruled firm and slightly higher, but the under grades were quiet and unchanged. Quotations: Steers, 18-25c; heifers, 19-23c; cows, 12-18c; city dressed, choice, 28-30; country, dressed, 23-25c; sheep, 20-23c; lambs, spring, 30-32c; hogs, 32c.

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PHILADELPHIA HAY AND GRAIN

Philadelphia, Aug. 4, 1919.

Baled Hay and Straw.—Receipts 12 tons of hay. Market firm. Timothy hay, according to location: No. 1 nominal; No. 2, $36-37; No. 3, $32-33. Clover-mixed hay, light mixed, $36-37; lower grades, $31-35.

Straw.—No. 1 straight rye, $13.50-14; No. 2 do, $12.50-13; No. 1 tangled rye, $13-13.50; No. 2 do, $12-12.50; No. 1 wheat straw, $12-12.50; No. 2 do, $11-11.50; No. 1 oat straw, $12-12.50; No 2, $11-11.50.

Bran.—Scarce and firm. We quote car lots including sacks: Soft winter bran in 100-lb. sacks, per ton, $50-51; spring bran, in 100-lb. sacks, per ton, $49-50.

Wheat.—No. 1 Red Winter, $2.39; No. 2, $2.36; No. 1 garlicky, $2.37; do, No. 2, $2.34.

Corn.—Yellow, in car lots, $2.12-2.14.

Oats.—No. 2 white, 88½-89c; No. 3, 87½-88c.

NEW YORK HAY AND GRAIN

New York City, Aug. 4 1919

Feed.—The market for mill feed was again strong on account of light offers and a scarcity of supplies. Buyers, however, were not disposed to pay the prices asked and trading was consequently of a very limited character.

Quotations: City feed, bran, $49; middlings, $59 in 100-pound sacks, red dog, $69, nominal, in 100-pound sacks; Western spring bran, $49-50; standard middlings, $60-61; flour middlings, $65-66; red dog, $71-72, all in 100-pound sacks, 30-shipment. Oat feed, $31-32; rye middlings, $48; white hominy feed, nominal, all in 100-pound sacks. Cottonseed oil meal, nominal; linseed oil meal, nominal, in 100 pound sacks.

Hay and Straw.—Hay market is very strong at all harbor points. Arrivals are light, trade active and market about $2 and $3 per ton higher. Rye and oat straw steady as quoted.

Hay.—No. 1 large bales, $44-45 ton; No. 2, $41-43 ton; No. 3, $36-38, shipping, $32-34 ton. Fancy light clover mixed, $40-42 ton. Clover, No. 1 mixed, $35-37.

Straw.—Per ton, No. 1 rye, $14-15; No. 1 oat, $11-12.

Wheat.—No. 2 red, $2.37½; No. 2 hard winter, $2.37½.

Corn.—No. 2 yellow, $2.09¼; No. 3 yellow, $2.08¼.

Oats.—Standard, 84¾c.

Rye.—Export, $1.69½.

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PHILADELPHIA DAIRY MARKET

Philadelphia, Aug. 4, 1919.

Butter.—Receipts, 1,377 tubs. The Produce Exchange was closed as usual on Saturday and there was virtually no wholesale trading. Prices were unchanged. We quote: Fresh solid-packed creamery, extra, 56½c; high-scoring goods, 57½-59½, the latter for jobbing sales; extra firsts, 55½c; firsts, 52½-54½; seconds, 50-52c; thirds, 47-49c; sweet creamery, choice and fancy, 58½-60½c; do, fair to good, 53½-57½c; ladle-packed, as to quality, 47-49c; packing stock, 45-46c; fancy brands of nearby prints jobbing at 62-64c; good to choice, 57-61c; fair, 52-55c.

Cheese firmly held. The quotations were: New York and Wisconsin flats, current make, choice, 33½-34c; specials higher; fair to good, 32-33c; jobbing sales of fancy goods, 34½-35½c.

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NEW YORK MILK MARKET

New York City, Aug. 4, 1919.

Business was active last wek in all branches of the trade and the surplus disappeared for the first time in several months. The August rate in 200-mile zone for 3 per cent milk is $3.13 per 100 lbs; the 3.06 per cent is $3.37, and the 4 percent $3.53.

Receipts of milk and cream in 40-quart cans for the week ending August 2, 1919, were as follows:

Railroads	Milk	Cream
Erie	42,772	5,942
Susquehanna	5,844	860
West Shore	16,130	2,314
Lackawanna	59,078	4,116
N. Y. Central (long haul)	151,148	4,120
Ontario	45,329	1,887
Lehigh Valley	51,723	1,725
New Haven	6,819	82
Pennsylvania	12,122	473
Other Sources	6,300	200
Totals..........	397,258	21,724
Same week last year.....	410,155	21,610

CHEESE MARKETS

Cuba, N. Y., July 30.

Cheese at Cuba and Salamanca markets, 32¾c.

WOOL MARKETS

The Boston Commercial Bulletin of August 2 says:

"The market has been less active this week, many of the manufacturers being away for vacations, having already covered their needs fairly well. Such sales as have been made, however, show continued strength and even a rising tendency on certain classes.

"The foreign markets are all firm and the market at Buenos Ayres is strengthening. The mills are well sold ahead. Mohair is slow of sale and unchanged."

Ohio and Pennsylvania Fleeces.—Delaine washed, 88-90c; delaine unwashed, 82-86c; fine unwashed, 62-63c; ½-blood combing, 80-81c; ⅜-blood combing, 71-73c.

Michigan and New York Fleeces.—Fine unwashed, 59-60c; delaine unwashed, 78-82c; ½-blood unwashed, 75-78c; ⅜-blood unwashed, 70-71c.

Wisconsin, Missouri and average New England.—½-blood, 72-75c; ⅜-blood, 68-70c; ¼-blood, 64-65c.

Virginia, Kentucky and similar.—½-blood unwashed, 81-82c; ⅜-blood unwashed, 73-74c.

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TOBACCO MARKET

"To the President of the United States:

"Lancaster County Tobacco Growers' Association, composed of 1,000 representative farmers, earnestly protest against the proposed removal of headquarters Ninth Internal Revenue District from Lancaster, Pa."

Thus read a protest sent the President and also to Commissioner Roper. The Cigar Tobacco Board of Trade, many prominent bankers and business men, as well as several manufacturers, have made similar protests. It came about by the proposal to combine the Ninth district with the First and the removal of the headquarters of the former to Philadelphia. To do so, it is claimed, would involve great inconvenience to all concerned and would create a situation described as one in which the "tail would wag the dog." But if lively protests avail, there will be no such change.

The 1918 product is gradually finding a market, as shown by the many sales recently. Prominent among these was that of 684 cases from the Tobacco Growers' Association, and another from a large producer who sold the product of 28 acres. Prices were not given, but it is known that they were higher than could have been realized at any past time and on a basis satisfactory to sellers. It is said that sales were largely fillers and that they will be exported. The new crop is doing well, facilitated by abundant rainfall and warm weather. However, proper cultivation has been impossible in many instances, owing mainly to the rapid growth of weeds and the pressure of wheat and hay harvest, threshing, etc.

POTATO GROWERS MEETING

Every wide awake potato grower in New York State and in neighboring states is urged to attend the fourth annual summer meeting of the New York State Potato Association to be held Saturday August 9th, 1919, at the farm of C. A. Lacy, Route No. 7, Fulton, New York. Fulton is located centrally to the several local seed growing associations thruout the state. Ideal highways and railroad connections will facilitate transportation from all directions. This promises to be the most generally attended meeting of potato growers ever assembled in New York. Here is a time and place for the discussion of all those questions that potato growers have been pondering over for so long.

Such problems as the latest potato diseases, namely potato wart, mosaic, leaf roll, and streak, the marketing of certified seed and its bearing on the Association, future seed sources for Long Island and New Jersey and crop prospects for 1919 will all be here discussed. Committees are already at work formulating plans for future cooperation between the potato seed producer and consumer. Efforts are being made to secure speakers from Long Island, New Jersey, Washington, D. C. and Ithaca.

PREPARING FOR BUTLER TRACTOR SHOW

The Butler Chamber of Commerce and the Butler County Farm Bureau are prepared to answer queries regarding the State Tractor Demonstration to be held at Nixon Stop on the Short Line, near Butler, Pa., August 21 and 22. Guide signs are being placed along the main highways showing the direction to the tractor demonstration. Following is list of Butler hotels at which accommodations may be secured if reservations are soon asked for.

Nixon Hotel, $1 to $2.50.
New Willard Hotel, $1 to $2.
Park Hotel, $.75 to $1.
Arlington Hotel, $.75 to $1.
Monroe Hotel, $.75.
Atlas Hotel, $1.
New Monroe Hotel, $1.
Bowman Hotel, $1.
Hotel Butler, $.75.
Clinton Hotel, $1.
All European Plan.

STATE TRACTOR SHOWS

Late reports indicate that the Pennsylvania Tractor Demonstrations at Harrisburg, August 12-13, and at Butler, August 21-22, will surpass anything of the kind ever before attempted in the state. While the total number of tractors to be shown cannot be stated positively, it is quite sure that there will be near twenty-five, perhaps more. At least, all the best known makes will be entered and can be seen at work.

Two new features have been announced. Market gardeners will be especially interested in two makes of garden tractors to be shown, suitable for doing all kinds of garden work. The other feature will be dynamiting demonstrations in which hedges will be removed, ditches dug and stumps blown out. Special attention is being given to caring for the record crowds expected.

MORRIS COUNTY FAIR

The Morris County, N. J. Fair Association will hold its first agricultural fair at Morristown, September 25-26-27.

TO ADVERTISE NEW JERSEY

To advertise the exceptional advantages of New Jersey there has been established in the Department of Conservation and Development, a Land Registry Bureau whose functions include: Locating and listing all farms for sale or rent. Finding ready-made farms at low prices for returning soldiers and sailors or others interested in farming. Recommending wild land fit for farming which can be bought at low cost by those ready and willing to clear it. Locating sections suitable for new industries, etc. For complete information address Department Conservation and Development, Trenton, N. J.

Cletrac
TANK-TYPE TRACTOR
(Formerly known as the Cleveland Tractor)

THE Cletrac Tank-Type Tractor does most of the work formerly done by horses and mules—does it *better, quicker, cheaper*—and does it *twelve months in the year.*

A million American farmers can profitably use such a tractor. It does far more than merely plow. That is *only the beginning of its usefulness.* It goes right through with the *entire preparation of the seed bed*—from plowing to seeding. And in addition it reaps, binds, threshes, hauls, cuts ensilage, fills silos, saws wood, digs potatoes and does many of the numerous other chores always necessary about the farm.

The Cletrac stands on two long "feet" each 50 inches long by 6 inches wide. And because of this immense "foot" surface it is kept on top of the soil. It will work *efficiently* on wet or sandy soil. It will go over the seed bed without sinking in.

It is only 96 inches long, 52 inches high and 50 inches wide. But in spite of its small size the Cletrac is extremely powerful and will do the work of six horses or mules—and has a speed of from forty to fifty per cent *greater* than the average tractor. And it will work on side hills and grades where most tractors fail.

The Cletrac operates on gasoline, distillate or kerosene, but is specially designed to use kerosene or distillate.

Every Cletrac dealer is well equipped to give you prompt, efficient service. Early ordering is important.

We have an interesting and instructive thirty-two page book entitled "Selecting Your Tractor" that will be sent free upon request.

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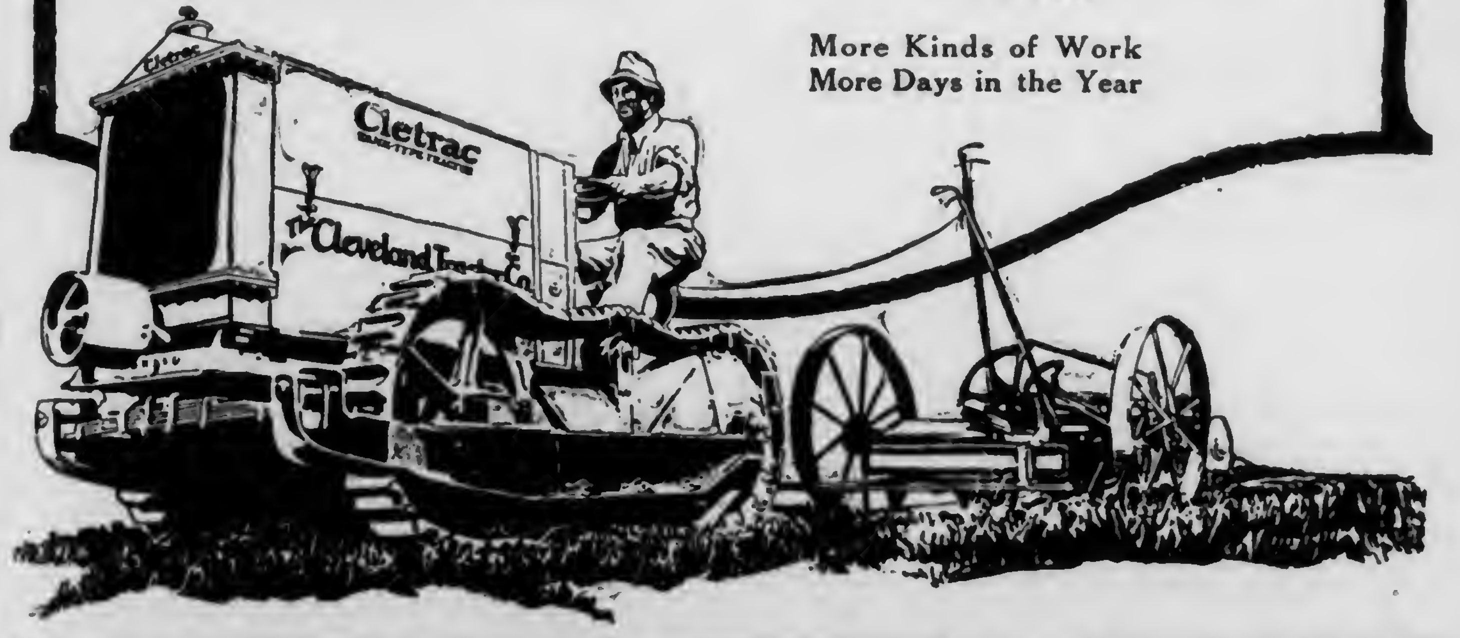

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It Helps Nature to Heal and Cure. Penetrates, acts quickly, yet is perfectly harmless. Kills all Germs and prevents Blood Poison. Nothing so good known as an application for Sores, Wounds, Felons, Exterior Cancers, Burns, Carbuncles and Swellings.

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Mrs. James McKenzie, Edina, Mo., says: "Just ten applications of Caustic Balsam relieved me of goitre. My husband also cured eczema with it, and we use it for corns, bunions, colds, sore throat and pain in the chest."

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Save 40 per cent on bailing cost! "*Figure your saving by using straight wire. No Bale Ties.*" Get wise to the new method introduced by the marvelous new patent Self-Threading Hay Press. No blocks or bale ties to handle—save the pay of two men. Make big money bailing hay for others. Write for free catalog showing all types of this wonderful new press. [illegible]
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261 So. 3rd St., Phila., Pa.

Why The Road Went North of Hockomock

By HUGH PENDEXTER

"How many preliminary lines have ye run?" cunningly asked McIntosh, tilting his shrewd old head and eyeing Lodge closely.

"Four," was the prompt answer. "The locating party in the spring will locate the one south of the lake."

"You're sure the Winnipeg office will order that?" asked the Scotchman, bending and trifling with the draft of the Sibley heater; for although the Indian summer had just waned, the air was chill, with threatening snow, and inside the tent, without heat, was colder than the sunlight.

"They'll naturally follow their engineer's report," returned Lodge, exhibiting some surprise at the query. "Why do you ask?"

McIntosh leaned back and half closed his eyes and slowly explained, "I want the road to run north of Hockomock."

The engineer winced and betrayed some anxiety as he earnestly retorted, "But the line south of the lake is cheaper. Of course, I have nothing to say as to which line the locating party will be told to follow. My work's done when I submit my reports to the Winnipeg office."

"And why can't your reports favor the northern line?" calmly demanded the Scotchman.

Lodge flushed and for a moment looked embarrassed; then his gaze flickered with anger as he coldly answered, "I've already told you. The southern line is the cheaper, therefore the logical route. My employers aren't building railroads for their health or as a diversion."

Bruce McIntosh, a power in the Dominion and already several times a millionaire through his investments in the country, studied Lodge sharply for a few seconds. He had hoped the young man would be more complaisant, but mere resistance to his will was only an obstacle to overcome, and he gathered himself with the old tingle of joy as he recognized opposition. His trip to the north of Hockomock Lake, at the foot of the mountain of the same name, had been planned expressly for the purpose of winning the young engineer over to his way of scheming. The camping party besides the guide included two well-known capitalists from the States, bold men who would plunge to the tune of millions without turning a hair, and Miss Mary McIntosh. It was because of Miss McIntosh's presence that Lodge had dropped his work fifty miles south and joyously accepted the invitation to spend a week in camp. Up to the moment of this interview he had never suspected the Scotchman as possessing any ulterior designs, but now that the shadow of a doubt crept into his open mind he felt as if doused with ice water.

As he finished his rather stiff answer and as his host continued inventorying him, he began to remember that the camp stood in the heart of one of the noblest stands of timber in all British Columbia. The region lacked only transportation facilities. If he had indorsed the line north of the lake it would tap the McIntosh holdings and enrich the Scot and his friends many hundred percent. Incidentally it would recommend him to the good opinion of the capitalist.

McIntosh was now speaking, dropping a bit into the dialect as he slowly summoned his power of logic and persuasion to justify his request. "I've kenned this country a vera long time. I ken weel the route the preliminary survey seems to favor; but I ken the route north o' Hockomock is more feasible and is the one Winnipeg should be told to follow."

There was a new edge to the Scotchman's voice, altho he endeavored to speak gently as he said, "The initial cost of road building isn't the prime factor always that we should consider. Ye ken that. If your only purpose was to get somewhere, regardless of what region ye opened up, it would be best to strike the head of the Fraser, follow it for grade, and tap the C. P. at Westminster. But there's a bigger and more consequential object in putting through a road when you're crossing virgin country. That's resources. Whatever trifling extra cost the northern line might cause is more than offset by the natural resources of the country."

"I'm not supposed to take the welfare of private enterprises into consideration when making the preliminary surveys," bluntly retorted Lodge. "I simply report to the Winnipeg office as to the routes. My figures speak for themselves. If you, or any other gentlemen, wish to lay any proposition before the road's officials, it's perfectly proper for you to do so. The line can't be changed?"

"That's final?"

"Absolutely."

"I'll bid ye a vera good-day, Mr. Lodge. I ken ye'll be going South soon." And the Scot's voice was deadly cold.

Lodge's tanned face burned a deep copper as he heard his dismissal. For the first time he fully realized his company had been sought that his conscience might be debauched. And he thought of Mary McIntosh. Could it be possible she was knowing to her father's purpose? The suspicion sickened him. After ten years of roughing it, with but few women to remind him of home, this clear-eyed girl, fresh from civilization, had been a miracle to him. It had seemed a wonderful thing that throughout his week's stay in the camp she should have shown a deep interest in his work and should have insisted that he talk much about himself. He couldn't understand how his fight with the primitive could spell romance to her hardy spirit. He had forgotten she was the daughter of her father.

"I'm quitting at once," he informed, rising and backing from the tent. McIntosh was busy feeding wood to the heater and ignored him. With despair filling his heart, he left the tent and made for his own quarters, humiliated in pride. Blazes, the breed guide, and young Dally, son of one of the capitalists, were playing poker for cigarettes in front of his sleeping quarters.

"Say, Lodge, the Siwash is trimming me most everlastingly. Do you suppose he plays fair?" complained the youth and pointing at the parapet of white tubes before the guide.

If Lodge gave any reply he was not conscious of it. His only desire was to get away, to win clear of the place where he could breathe free and feel clean. A few seconds sufficed to roll up his Hudson Bay blankets and rabbit-skin robe. Then the pack was slung on his back, and snatching up his rifle he was about to depart when voices from the next tent reached his ears.

He had no desire to play the eavesdropper, but he was compelled to heed Dally, Sr.'s, strong, confident voice telling MacCromb, the second magnate, "It's a cinch. McIntosh is taking his measure now. Everything's cooked and ready to serve. Trust the Scotchman to get the chestnuts out of the fire without burning his paws. His terms to us are rather high, but it's like finding money."

"I never like a scheme that depends on one man," protested MacCromb. "Strikes me you're too cursed sure the line can be changed."

"I'll bet you ten to one and you name the limit," laughed Dally.

"If it wasn't for the girl I'd take you and break you," grimly returned MacCromb. "Everything pivots on her—another thing I don't like. Never make a deal where a woman is the hinge to swing it on."

Ten years of roughing it with rough men destroys one's respect for the artificial in life, and Lodge was filled with hate and despair as he struck into the south trail. Bah! It was sickening. And yet she was Mary McIntosh. The air was filled with frost and snow was on its way, but his blood ran hotly and his forehead was sticky with sweat as he strode along. If he could only make the lake—never see her again. Then the bottom seemed to drop out of his soul as he concluded this wild wish; for he had builded his whole future on the theory of always having Mary McIntosh participate in his success. Not to see her again——

"Where's the wild man hurrying to with head bowed and his brows crawling into naughty frowns like angry caterpillars?" her calm voice broke in.

He came to a stumbling halt and jerked up his head. She was seated on an uprooted tree, sketching, her fingers showing red from the cold. In her blue eyes danced many questions.

"I'm going back to work," he hoarsely answered, gazing at her sadly.

"An informal leave-taking," she lightly murmured, rising and moving into the trail. "Everyone is inform up in this region. I wish you luck."

"Thanks." He tried to think of something to say. He could not tell her that her father had sought to buy him. She either knew and would be ashamed at hearing him, or she must never know. No; he could not tell her that. Besides, he wanted to try and think she did not know. As he paused, tongue-tied, her gaze hardened and he interpreted her expression as evincing contempt. The belief stung him, and straightening, he quietly added, "Your guide knows his business, I assume. But remind him the steamer makes its last trip for the season on the seventh day from now. Snow's coming; to miss the boat might mean fearful hardships."

"Possibly you're afraid of being caught by the first flurry of snow and want to get out while it's safe traveling," she innocently observed, but with no softening of her eyes.

"Yes, I'm afraid," he sadly assented. "Have it that way, Miss McIntosh. But I shan't wait for the boat. I shall cruise round the lake and make the line afoot."

Before he could fully realize the break between them he was hastening blindly down the trail, while she had disappeared in the direction of the camp.

How Doughboys Improved Their Time in Educational Classes Conducted by the Army Y. M. C. A.

* * * * * *

With a muttered exclamation of triumph Lodge painfully limped toward the opening, through which he obtained his first glimpse of the gray waters of Hockomock. For three days he had been forced to lie up under a lean-to, nursing a badly wrenched ankle. Three days more he had used in making the lake, often compelled to pause and shoot some feathered game as his pack was nearly exhausted. Half starved and weighed down by fear, the steamer would pass the head of the lake before he could make the shore, he had stuck to the trail with his right foot practically out of commission. By will power he had covered the distance, and it was the seventh day since he had quit the McIntosh party, intending to cruise the entire fifty miles afoot. That plan was entirely out of the question now, and it was a gamble whether or not the boat had come and gone. He dreaded to find himself face to face with her on the boat, and yet the probability thrilled him.

Throwing aside his blankets, he stared anxiously down the long stretch of leaden waters. The clouds hung low and were spitting a flurry of snow, and his imagination played him queer tricks.

As he gazed, striving to reorganize his nerves, he suddenly leaped from the rock and with a low cry of incredulity fell to his knees, for the moment forgetful of the stabbing pain through his foot. The imprints of a shoe made toward him and then circled back and vanished as the wanderer regained the bare, brown floor of the forest. It was the size of the track that first startled him, so small and so entirely different from the moccasin impress left by any Indian woman. Nor did the traces conform to the characteristic traces left by a squaw. It was the trail of a neatly booted white woman. But why was it here and why did it swing so meaninglessly to the shore and then retreat to the cover of the woods?

"Logic, logic, old man," he commanded as he regained the mastery of his mind. "Why should she come here—whoever she may be? Why am I here? She came to see if the steamer was in sight. This snow fell since early morning. She came recently or the tracks would be obliterated. What white woman—for white she is, I'll swear—would be cruising around these parts, and alone? Good heavens! It can't be."

Abandoning his blankets and retaining only his rifle, he limped in pursuit of the trail till it became lost under the fir and spruce. Then he halted and took stock of his own predicament. To follow the tracks might —probably would—cause him to miss the boat. That spelled a fifty-mile tramp through a rough country, through woods and windfalls, in zero weather, and with a crippled foot. He would have no guarantee of food.

It seemed as though he had been cruising for hours, whereas it was but some thirty minutes, when he caught the acrid odor of wood smoke. Testing the air critically, he advanced more slowly and was at last rewarded by the faint sound of voices. Setting up a cry, he quickened his pace and was at once answered by a clear, ringing call. No one but a woman could have sounded that note, and his heart tightened as he believed he had identified her. Then he broke through the last barrier of undergrowth and saw her. She was standing before a low shelter, built of poles and brush, her fair face turned toward him, her grave eyes aflame with anxiety.

"Mr. Lodge!" she exclaimed as he advanced.

"Miss McIntosh," he cried, "what's the matter? Why are you here alone?"

"I'm not alone," she replied. "We've met with misfortunes. The guide was badly wounded by a bear. Mr. Dally, Jr., is ill. I fear it may be pneumonia. His father is half mad through distraction. The food gave out yesterday. Father and Mr. MacCromb are very weak, although they've borne up bravely. Mr. MacCromb gave out last night. Father tried to accompany me to the lake, but was too weak. Has the steamer come?"

"I don't know," he answered, limping to the lean-to.

"You're hurt," she softly said, stretching out a hand to assist him.

"A bit of bad luck," he mumbled, bending before the low opening.

Young Dally, flushed with fever, was stretched out on a bed of fir boughs, his frightened father huddled up at his side. Nearby was the breed, his Indian stoicism repressing any show of suffering, although his lips were bleeding where he had bitten them. McIntosh had his blanket pulled up over his head, apparently prostrated by their calamity. MacCromb lay on his back, his eyes staring foolishly at the slanting roof. None of the men seemed to sense Lodge's arrival.

"Where's your equipment?" cried Lodge as the girl kneeled beside him. "Why haven't you a fire burning?"

"We abandoned everything yesterday when we ran out of food," she wearily replied. "We haven't any matches. The men had all they could do to get the Indian and young Dally this far. They lugged the Indian in a litter. Young Dally managed to walk part of the way. I helped his father carry him when he gave out. Then I built this shelter—not very good, but the best I could do."

"You're a brave little woman," he softly said, as he gently turned back the Indian's mackinaw and opened the hunting shirt.

"Mist-a-ya makeum hurt," murmured the Indian.

Lodge winced as he beheld the long, cruel slashes that enveloped one-half of the guide's body. "Me killum," proudly added the guide.

"Good work, Blazes," applauded Lodge, deftly removing the clumsy bandages and refashioning them. Although the grizzly had slashed the guide's back and one side to ribbons, a more careful examination told Lodge that he would survive, provided he could be taken to the foot of the lake, where the surveying party could give him adequate treatment. A white man would have had scant show; the Indian would win out.

"Blazes urged us to cut off some of the meat," shuddered the girl; "but it was all so terrible—their fight—that we hurried away as soon as we could make a litter."

"How far are we from the lake?" asked Lodge, rising and gaining the open.

"A long distance," she sighed.

"Walkum one mile," corrected the guide, his small eyes lighting as he scented the possibility of winning clear to the steamer.

Lodge shook the Scotchman by the shoulder. McIntosh had been dozing and was unable at first to understand the situation. When he spoke it was to ask, "What are ye back for?"

"To get you people out," cried Lodge. "Crawl out and help Dally carry the boy to the lake. It's a mile. MacCromb and I will take care of the guide."

"Father isn't able. I'll help with the litter," promptly offered the maid.

"You'll reach the lake at top speed and build a fire and hold the boat if it comes before we arrive," sharply corrected Lodge. "You're the swiftest-footed one here. Take these matches and run for our lives. Follow the trail you made today. Be off!"

She hesitated as though to contend the point. Then as his stern eyes caused her gaze to waver, she surrendered and started nimbly through the woods. Her last glimpse of the camp was to see Lodge shaking MacCromb and Dally roughly while her father dragged a rough litter from behind the lean-to.

The mile soon sped beneath her anxious feet and she cried out loudly in triumph as she gained the shore and beheld the steamer nearly abreast of her but hugging the opposite shore. From the birches she wrenched strips of bark and lighted the pile. On the red mass she heaped the dead limbs of fir and spruce until a shaft of flame leaped high toward the gray canopy. The snow had ceased, leaving a gray world. The waters, the low clouds, the distant boat—all were gray; the signal fire alone stabbing the monotony and dreariness with its crackling flames. The steamer worked slowly up the lake and then turned and for a few minutes headed for her and the fire. Now the danger was over she felt weak and inclined to tears. Before she could indulge in this emotion she was horrified to see the bow of the boat swing about until she was headed down the lake.

"We're left! We're left!" she shrieked, sinking beside the fire, covering her face with her hands.

A man's voice snarling out an oath caused her to lift her head. Lodge, limping fearfully, was breaking from cover, his right hand shaking the rifle at the steamer.

"They've left us!" she wailed.

He did not heed her, but fastened his glaring eyes on the boat while he discharged three shots at the heavens, the reports almost blending into one. Both man and woman saw several figures near the pilot house leaning over the rail and gazing curiously in their direction.

"That'll fetch 'em!" he panted. "They didn't understand your signal. They thought it was some Indian camp. They'll turn in now."

"But they don't! They don't!" was her agonized cry.

Shading his eyes, Lodge scanned the steamer closely. She had not altered her course.

"Damn 'em!" he passionately gritted, dropping to one knee and taking careful aim. "They'll notice this."

The whip-like crack was instantly followed by signs of activity aboard the steamer. The figures at the rail vanished. The heavy bullet had smashed a hole through the pilot house within six inches of the wheelman's head. Lodge remained motionless, his rifle lined on the pilot, whose head was a dark silhouette through the window.

"Are they turning back?" she whispered.

"Either that or they'll need a new pilot," he ominously returned, pumping a cartridge into the breech. The steamer's nose slowly swung about.

"They're coming in," he quietly assured, rising and dusting the snow from his knees. "I heard your outcry and quit the others to run on ahead and investigate. Lucky for all you gave the alarm."

"Lucky for all of us you came and found us," she sobbed.

He gazed down on her drooping figure hungrily. "I wonder if you can feel anything besides 'just thanks,'" he murmured. "It's the law of the trail to lend a hand. What I've done is for myself as well as for you. You know how I feel, Mary. Do I have a chance? I've had a rare old row with your father. Would that make any difference?"

With two quick dabs she cleared her eyes of tears and smiled whimsically as she reminded, "Dad does as I say outside of business. You weren't referring just now to business, were you?"

"Hardly!" he managed to say.

* * * * * *

The wedding took place at Calgary, and McIntosh seemed to be in the best of humors as though hugely pleased with his son-in-law. After the Dallys, father and son, had departed, the last of the wedding guests, the Scotchman said, "I ken ye plan to take Mary to Winnipeg and then to New York on the honeymoon."

"We'll stay in Winnipeg just long enough to settle up the office business; then we're off for the States," joyously assured Lodge. "And next spring I'm going to take time off and go camping with Mary up at Hockomock. Blazes will guide us. In the spring we'll find it as beautiful and gentle up there as we found it sullen and harsh while waiting for the boat."

"Hockomock is very much like your father-in-law," chuckled the Scot. "By the way, Benny; I have some mail for ye. Ye may care to look at it before leaving."

Impatiently tearing open a long, official looking envelope, Lodge was giving it but a glance; then his eyes widened and he whistled softly.

"What is it, dear?" murmured the bride.

"By heavens! The old boy has put one over on me. No holiday at Hockomock—but business. The office directs me to locate the route north of Hockomock."

"I kenned ye were vera likely to change your mind," observed McIntosh, his frosty blue eyes twinkling brightly. "I'm a director in the road now." And that's why the road went north of Hockomock.

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Not blessed with any peculiar luck;
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"Yes."
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they could
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made good.

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who works,
Who neither labor nor trouble
shirks,
Who uses his hands, his head, his
eyes
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tries.

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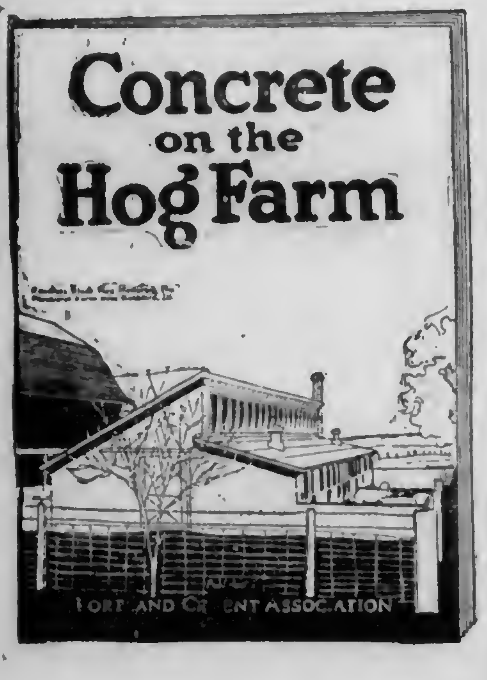

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LIVE STOCK

ERADICATION OF HORSE OR STABLE FLIES

During the last four or five years, the public have been making great endeavors to subdue the house fly. Cities have made their slogan, "swat the fly," and other phrases which have the same meaning. The house fly is known to be a carrier of disease and hence he should be killed. Moreover, aside from the fact that house flies carry certain infectious diseases, the very nature of their mouth parts enables them to carry other diseases which are not of a contagious nature.

While it is proper to kill the house fly and thus exterminate him, it is no less essential that the horse or stable fly should also be destroyed. This fly has mouth parts which are unlike those of the house fly. The stable fly bites while the house fly does not, altho the stable fly resembles the house fly in appearance. In the summer time the stable fly annoys cattle and all other animals very greatly. Before storms these flies seem to have an instinctive fear of the storm and they flock around the houses and buildings and attack people more at those times than at any other. Aside from the annoyance that they prove, they are also accused of being the carriers of infantile paralysis. This is not conclusively proven against them but they are suspected of being the transporters of this dread disease which causes a great deal of suffering and misery each year. The young of the stable fly lives in fresh horse manure and, as is the case in combatting any other insect pest, the first point of attack should be its breeding place.

Inasmuch as this same stable fly is very easily killed, there is not much excuse for not killing him and thus ridding both ourselves and our animal friends of his annoying habits. It is a well known fact that cows give more milk when not annoyed by flies, and other stock put on flesh faster when the flies are subdued.

Here is a remedy which has been tried with great success on a number of farms: Make a cover for a barrel and put the covered barrel in some safe place convenient to the stable. Fill this with water and throw into it four or five pounds of white arsenic. Stir well and the next day put in one-half pint of molasses. Each morning dip out a sprinkler full of this mixture and sprinkle over the stable floors and manure heaps. Fill the sprinkler with pure water and put in the barrel again. This keeps a constant supply of the mixture always on hand and once in a while a little more white arsenic and molasses is all that will need to be added to make the liquid effective in killing off the flies. The theory of the practice is: The white arsenic will not all dissolve in the water, only enough to saturate it. Some will be left undissolved in the bottom of the barrel. Now when the sprinkler full of fresh water is dumped into the barrel, more of the arsenic will dissolve. So the process goes on each day until all the arsenic is dissolved.

Needless to say, this mixture is very poisonous and stock must be kept from getting into the barrel, also hogs and poultry from having access to the manure pile. This remedy has proven efficient and is one which is easily applied and the extra profits derived from the herd and other animals will more than repay the owner for the time and expense involved, to say nothing of eradicating this possible menace to children.—I. J. Mathews.

Black Face Highland Sheep Owned By Donald McClure, Steuben Co., N. Y.

CARE OF PIGS BEFORE WEANING

The fastest and cheapest gains by pigs are made before weaning time, so ordinarily it will pay to keep the small pig growing as rapidly as possible. The sow should, of course, get some good milk-producing feed, and she should be fed to her full capacity as soon as the pigs are old enough to take all the milk she will give. It will not pay to limit the feed at this time, since the pigs make the most economical gains from feed fed thru the sow. When the pigs are about a month old, they will be able to use more feed than that obtained from the sow; even tho she is properly fed and a good milker.

As soon as the pigs will eat, which is usually at four or five weeks of age, they should be fed separately from their dam. They should have access to a small pen, where the sow cannot go, to receive their feed. Skim milk fed in a shallow pan is very good for them. The pigs may also be taught to run into the creep for feed by allowing them some shelled or ear corn. As soon as they begin to eat well, a slop made of milk, some shorts, a little bran, and some linseed-oil meal or tankage, fed along with the corn, will make a ration which, with proper exercise, will prevent thumps or scours.

A good ration for young pigs is made up of 4 parts by weight of corn, 4 parts of shorts, 1 part of bran, and 1 part of tankage. As the pigs become older, the corn may be gradually increased until the amount has been doubled.

In addition to proper feed, however, the pigs must have plenty of sunshine and exercise. These things cost little to supply and are absolutely necessary for best results.—L. A. Weaver in Mo. Cir.

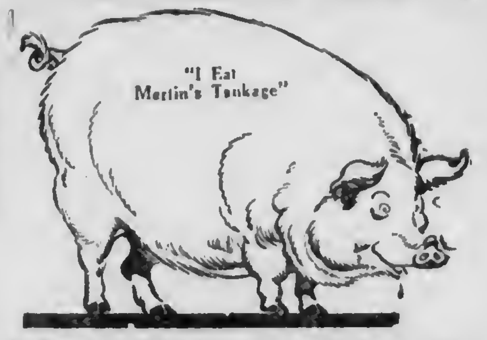
SLIP COLLAR FOR HORSES

I noted article in July 26 issue relative to method of preventing horse collar from injuring horse's shoulders. I cannot agree that it is the dried sweat on the collar that does the mischief in galling the shoulders. It is the attrition or rubbing produced by the movement of the collar upon the surface of the skin when the animal is in motion that causes the trouble. Prevent this and you can work your horse regularly. Even if his shoulders are raw when you commence to use him they will soon heal.

The arrangement necessary to accomplish this consists in having in addition to the ordinary all-leather collar, a flat pad or it might be called a sub collar, constructed out of solid harness leather. This is to be placed on the horse's shoulders where it rests in the same relative position all of the time the regular collar is on, without change of position. The collar is put on over this pad, but the two are in no way attached to each other. When the horse is hitched to a load and when he begins to pull, the traces hold the collar in one position altho there is a considerable shifting about of the shoulders over the face of the collar, creating friction upon the skin. By this arrangement the friction all comes on the leather pad instead of on the horse's skin.—J. C. Higgens, Somerset Co., N. J.

NEW BREED OF SHEEP

Corriedale sheep developed in Australia mainly by a Lincoln-Merino cross, are being studied by the U. S. Department of Agriculture at the Government 28,000-acre sheep-experiment ranch at Dubois, Idaho. There are at present about 1,500 sheep on the project divided into various classes. Australians claim for the Corriedales better mutton form than the Merino, more weight, and yet a good fleece of about three-eighths blood quality. It is expected that the tests now being conducted by the department will eventually result in a better average sheep, as to mutton carcass, than the breeds now on the market. The breed was introduced into this country by the Federal Department, but since that time many large private importations have been made. Part of the sheep on the Dubois range are being kept as straight Corriedales, while others are being crossed with American crossbreds.



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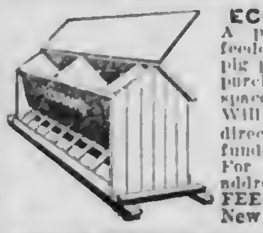

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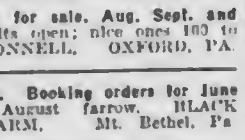

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Veterinary

Conducted by W. C. Fair, V. S.

Advice thru this department is free to our subscribers. Each communication should state history and symptoms of the case in full; also the name and address of writer. Initials only will be published. We cannot make reply by mail. This is one of the most valuable columns of the paper and we invite readers to make use of it. Clippings from this column, when properly preserved and classified, make one of the most valuable medical symposiums a farmer-stockman can obtain.

Colt Walks on Toe.—I have a colt, four months old, that walks on toe of left fore foot. The lower joint of leg fails to bend enough. It has been in this condition for the past 30 days. I wish you would tell me the cause and remedy. J. E. K., Bellefonte, Pa.—Apply one part tincture iodine and two parts camphorated oil to crooked parts of colt's leg, once a day. A surgical operation will perhaps be necessary before a recovery can take place, but such work should be done when weather is cooler. I am most inclined to believe it the result of an injury.

Too Much Bowel Action.—I have a driving horse that weighs 1,100 pounds and as soon as I drive him a short distance his excrement becomes very thin; at times it is so thin that it splashes. The peculiar part is that it does not weaken the strength or energy of the horse. What remedy would you advise? A. S. H., Brodbecks, Pa.—Careful feeding and watering of such a horse as you describe will slightly check this excessive bowel action, but the cause is exercise. This horse should not be used for road driving and never driven faster than a walk. Water him before feeding grain, stint his water supply while he is being driven; but best of all, use him for slow work only. Drugging a well horse is not good practice. Controling his bowel movements by giving him astringents will soon do him harm.

Catarrh.—Last winter one of my two cows developed a disorder in the nature of a whitish discharge from both nostrils. It had no apparent odor and seemed in no way to affect her otherwise, tho I may be mistaken. In less than a month the other cow developed the same trouble. I have done nothing for either cow. The first cow had a slight cough while eating but is over it now. Advice will be appreciated. W. C., Denton, Md.—Give each of your cows one tablespoonful ground gentian at dose in feed, three times a day. Avoid keeping your cows where there is much dust or in a draft.

Deep Milker.—I have a registered heifer, 19 months old, that was bred some 10 weeks ago. Now she has started springing and milk can be noticed leaking from teats. I would like to know the cause and what shall I do. So far as I can tell she is healthy and well. Is this a common occurance with registered stock? J. J. C., Townsend, Del.—Doubtless you have the making of a good dairy cow and to control this unnatural secretion of milk you had better stint her allowance of milk-producing food. It would be a mistake to give her drugs.

Heifer Has Fits.—I have a heifer that seems to have fits. She travels in a circle until she falls. These sick spells last about one minute, then she appears to be all right. Every two weeks she has an attack, such as I have mentioned. A. M. B., Myerstown, Pa.—Preceding these sick spells your heifer's bowels will become costive, or else she will bloat, the result of indigestion. Give her enough epsom salts to open bowels. The dose for 900-lb. cow is one pound. Also give her forty grains potassium bromide in feed or in drinking water, two or three times a day. The animal should be exercised and the bowels kept open. If she continues having fits she had better be sold for beef.

In some districts where cow testing associations are just being established, one-fifth of the dairy cattle deservedly find their way to the butcher within the first year.

Milk alone will sustain life indefinitely and that's something you can say about no other food.

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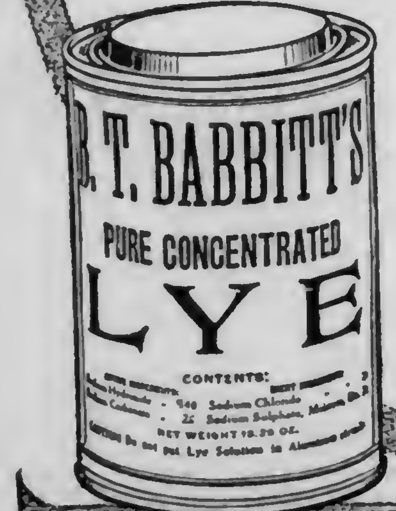

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	Days	Corn	Meat Meal	Wheat Middlings	Weight
No. 1	218	442 lbs.	33 lbs.	31 lbs.	296 lbs.
No. 2	156	148 lbs.	9 lbs.	14 lbs.	299 lbs.
Gain or Saving	62	294 lbs.	24 lbs.	17 lbs.	3 lbs.

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ESTABLISHED 1880
PUBLISHED WEEKLY

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Organizing A County For Better Hogs

How Cambria County, Pa., is Improving and Developing Its Swine Industry

By H. C. McWILLIAMS

Hog breeding and economic pork production have always been closely associated with corn belt conditions, but there are many other sections where breeding and feeding are profitable.

In the mountainous regions of Central Pennsylvania the growing seasons are too short for the production of corn, and the winters too severe for extensive wheat growing. But the conditions are favorable for the growth of forage crops, such as rye, oats, rape and Canada field peas, or the various combinations of the same. And the proper utilization of these crops means profitable pork poduction, as has been demonstrated by experiments made by some hog breeders in this section. Cambria County soils are largely Dekalb and climatic conditions are such that all cool season crops are profitable.

The markets of this section are exceptionally good. Mining towns are located over the county, five or six miles apart, so that there is practically no section in the county that is far distant from a good consuming market, and a market that is particularly favorable to the sale of pork and pork products. These are some of the main reasons that have led the farmers of this community to direct their attention to increased pork production by the economic use of forage crops.

Organizing the Growers

On November 18th, 1916, a meeting was called by the Live Stock Committee of the Cambria County Farm Bureau at which the prominent hog growers of the county were invited. The purpose of calling this meeting was stated by the chairman as being to discuss ways and means of obtaining better hogs and more of them in the county. The men present at the meeting realized that it cost no more to feed out for market purposes a pure-bred pig than a grade, and that when it came to disposing of young pigs or mature animals for breeding stock, the advantage would be decidedly in favor of the pure-bred.

The great drawback in developing the hog business was declared to be the lack of good breeding stock, there being comparatively few pure-bred hogs in the county, and these few widely scattered; possibly at the most only three or four upon any one farm. Discussion developed the fact that the hog breeders felt they could build up a more successful business and do it more quickly by working together than by working separately, and so they decided to organize

The Cambria County Pure Bred Swine Breeders' Association was formed in the spring of 1917, with thirteen members working in co-operation with the local farm bureau and the live stock extension specialist of State College. One of the first things this association thought best to do was to get additional hogs on the farms already growing pure-breds and to urge the purchase of pure-bred hogs for other farms that had previously paid no attention to the pure-bred hog business. The Secretary of the association was instructed to get into communication with high-class breeders and find out what would be obtainable in the way of pure-bred sows or gilts. When the replies were received, the secretary, armed with the supply of communications from reputable hog breeders, made personal visits to all the members of the association, showing prices quoted for individual animals. Five pure-bred gilts and three open gilts were purchased in this way. These animals gave the association members a good start with new stock in addition to what they already had on hand.

Six Pigs by Association Sire, an Exceptionally Uniform Lot

Disposing of Surplus Stock

An early question confronting the association members was: If we increase our pure-bred stock, how will we dispose of any surplus stock we might have for breeding purposes, inasmuch as there will not be enough stock on any one farm to attract the large buyers from a distance or to advertise it widely in an individual way. To remedy this, the Pure Bred Swine Breeders' Association had drafted into its constitution the following provisions:

1—This organization pledges itself to work for an annual, county-wide hog show and sale, at such a place and time as a majority vote of the members present shall determine.

2—All hogs offered for sale as breeding stock must be registered and the registration papers showing the breeding must be present for examination on the day of the sale.

3—The Board of Directors shall have power to fix the charges on all stock sold on the day of such sale to cover all necessary expenses such as auctioneer's fee, feed, stall rent, etc.

4—All stock entered and listed for sale at the annual hog show and sale must be sold to the highest bidder.

At a meeting called in June, 1917, the question of holding a sale during October of that year was discussed. It was found that of the 22 pure-bred animals that would be consigned to the sale, 21 would be open gilts. It was obvious that a sale of open gilts would not attract buyers nearly so well as a sale of bred animals, so the idea of holding a sale in 1917 was abandoned. But at that time each member pledged himself to be in a position to consign one or more bred animals to a sale to be held the next year.

The First Sale

In the spring of 1918 a condition shown to exist among the Berkshire breeders of the county was the absence of a service boar of proper type and individuality. This problem was rather hard because the members were so widely separated. One of the breeders finally agreed to purchase a high-class animal and later bought a particularly valuable individual, Rival's Son 228006 (Page 22), a son of Rival's Royal Master-

(Continued on page 22)

Poland China Gilts and Barrows on Oats. Oats and Rape Pasture. Forage Crops Make Good Pork at Low Cost.

Potato Growers, Attention!

Watch for Varietal Mixture in Your Potato Fields

August is the month when mixture of potato varieties can be detected most easily in New York and Pennsylvania. As you pass thru the field at blossoming time or just before and after this period, certain hills may present a disinct and different type of foliage or a different colored blossom. These should be staked, and at harvest time dug and stored separate from the main crop.

The Reasons

This mixture may have entirely escaped your notice heretofore or you may not have considered its elimination a matter of any concern. Nevertheless, mixture concerns both the grower and the consumer. Differences in shape, color and texture of skin of tubers in the market often detracts markedly from the appearance of table stock and reflects caelessness on the part of the grower. Furthermore, varietal mixture in so-called seed stock is now almost a disqualifying factor. The grades now recommended by the U. S. Department of Agriculture as U. S. Grade No. 1 and U. S. Grade No. 2 specify that potatoes so graded must be of similar characteristics.

August is the Time to Clean Up the Fence Rows and Roadsides

It is not uncommon to find fields in New York and Pennsylvania showing a mixture of varieties of tubers of distinct shape, skin texture and skin color. This is in part due to the fact that so very many types and varieties are now being used in these states. Even a half dozen hills of mixure to the acre this year may mean 50 to 100 hills of mixture next year after such foreign tubers have been cut for seed along with the main seed supply. This might easily result in enough mixture to disqualify the stock for seed purposes or to reduce it below the quality of the U. S. grades above specified.

Differences in seasonal maturity of certain varieties may result in direct loss to the grower when these types are mixed. For example, Irish Cobbler being an early variety and therefore lower in inherent yielding capacity than such types as the Rural and Green Mountains, would, when mixed with the latter, tend to reduce the maximum possible yield. Long Island growers who use white sprout or Green Mountain type varieties almost exclusively do not object so much to a few Cobblers mixed with their stock as having varieties of the blue sprout or Rural type which do not mature until after their crop is normally marketed.

The Method

The casual grower may presuppose that he can sort the mixture from his bin after harvest and before the crop is marketed. This is scarcely possible except as the mixture happens to be of some variety having a tuber shape and color quite distinct from that of the main crop. It is quite possible to pick Early Rose, Bliss Triumph or Early Ohio from a bin of Rurals or from a bin of Green Mountains, but altogether impracticable to attempt to separate Rural and Green Mountain varieties once they become mixed in the bin.

Such separation can, however, be readily made in the field at blossom time. Of the two principal types of potatoes produced in New York, namely, Rural and Green Mountain, the former exhibits rather spreading, sparsely foliated tops bearing considerable purplish or violet color on the stems and in the blossom. Also, the leaves of the Rural are smaller and thicker than those of the Mountain varieties. Since varieties of the Green Mountain type contain no color either in the blossom or on the stem, mixture of these two types can be eliminated under field conditions. The foliage of the Mountain type is also more upright later in the season and more dense than that of the Rural group. Very often Rural varieties can be detected in fields of Green Mountains just after the latter have gone out of blossom, by reason of the fact that the Rurals have just begun to bloom. Inasmuch as the Mountain group of varieties is the only one which bears no color either in the flower or on the stem, it is obviously easy to eliminate all other types from it, and vice versa.

As most growers object to digging out mixtures during the growing season on account of the resulting reduction in yield, such hills should be staked at times convenient to or along with the summer work on the potato crop, and dug separately in the fall. Staking should be resorted to on two or three occasions, as not all the differences in blossom and foliage character are apparent at the same time.—E. V. Hardenburg, Cornell University.

A Place For Buckwheat

In Pennsylvania Farmer of June 21, in an article on the value of buckwheat as a farm crop, I recognize many facts which I learned by actual experience many years ago when I was a small boy. My first recollection of buckwheat was the delicious buckwheat cakes my mother used to bake during the winter months after butchering time, then with plenty of ham and eggs and maple syrup in the spring. Those were combinations that naturally appealed to a vigorous boy whose constant employment was in the woods or out in the open fields.

My father's first act on the farm was to clear a patch on which to build a log house. Next came a garden spot and potato patch, then corn and buckwheat fields. Each field would be dedicated to that particular crop for years to come. (No rotation of crops in those days.) Many years have elapsed and I distinctly remember the exact spot of ground on which my grandfather's buckwheat was; altho a prosperous town now occupies the site. The recollection of those pancakes, ham and eggs and maple syrup still occasionally enhance my mental vision. But after many years of continuous buckwheat, the crop dwindled and got light, and the impression became general that the buckwheat was a hard crop on the ground, and a new field would have to be cleared. With that impression I rather abandoned raising it for several years until a ready demand developed in the west, where there is a large area of country in which it could not be raised. Then buckwheat became a quick, profitable crop. Then I began a series of experiments, and have found the following advantages in its culture:

Ragged Roadsides Are a Poor Advertisement for a Farm

Firstly, as a feed for stock. When I was the milkmaid in the dairy at home I learned that a pail of slop made from buckwheat middlings would put more "pep" into a cow and fill the pail fuller with milk than any other feed we could find. And for breeding sows and growing pigs, mixed with wheat bran or corn meal, it was excellent. Also to finish up a bunch of fattening steers ready for the shambles, buckwheat chop mixed with cornmeal and good hay, would polish up and add weight very rapidly. For all kinds of poultry, mixed with cornmeal and bran, it cannot be beaten; and as an egg-producer, mixed with wheat middlings, there could be nothing better.

Buckwheat makes an excellent crop to turn down when in full bloom for green manure, and still another virtue it possesses is in the fact that it will tame and mellow wild land, destroy wild grass and weeds, and all other rubbish subject to neglected land. Two hundred pounds of acid phosphate to the acre on the poorest kind of clay soil will produce a heavy growth of buckwheat, and if harvested the crop will pay well; or if you wish to enrich your land further, turn it down when in bloom and sow to rye that fall; to be turned down next summer when in bloom. This process will give you a seed bed filled with humus and plant food, mellow as an ash heap, in complete condition for any crop.

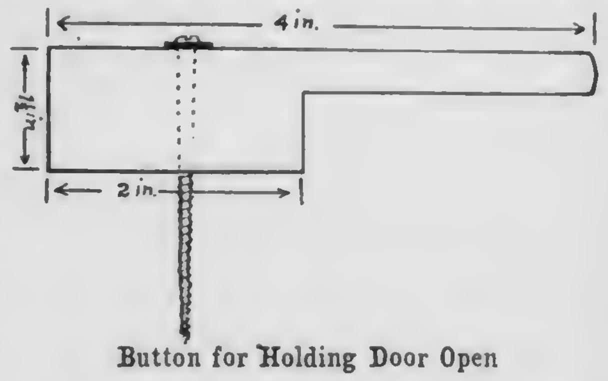
Buckwheat is being raised now over Western Pennsylvania in great quantities, because it can be produced from the poorest, worn-out land by a light application of acid phosphate, and sold for cash at a good price as it comes from the thresher, and only requires sixty days. But with the more thrifty farmers it is used more as a preparation for other crops, or food for all kinds of stock. To harvest it cheaply I use a side-delivery reaper, a foot dump. Make dumps as large as can be handled conveniently and as even in size as possible. Two men can follow the reaper and set up dumps, well spread at the bottom, with tops drawn together. Care should be taken to keep bunches sanding up until ready to thresh. I always took pains to have straw well stacked and sprinkled with salt. If in a field where stock can have access, cattle, horses, mules or sheep would eat of it greedily. It makes a change, and at any time you can haul it to the barn and use it for bedding.—W. R. McGill, Crawford Co., Pa.

To Hold The Mow Doors Closed

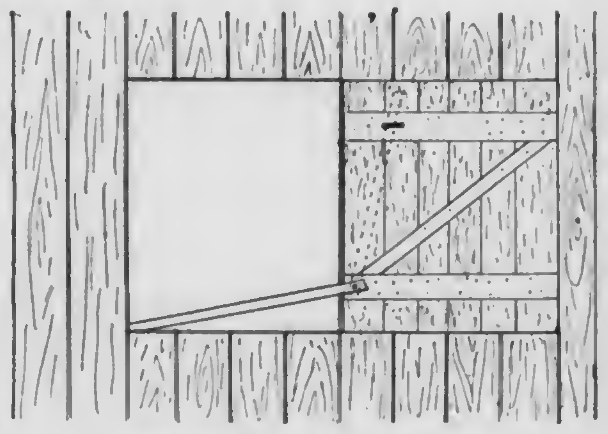
Mow doors that swing to the side often make a nuisance of themselves by blowing shut just when one is about to pitch a sheaf through. The accompanying sketches show two ways to prevent this.

The simpler device is a wooden button, made as illustrated, with the part "a" cut out the thickness of the door. The button is fastened to the side of the barn by a long screw, or better yet, by a bolt. It should be put just below the lower edge of the door and near the opening.

Another way to keep the door open is to bolt a flat stick of 1 by 2-inch stuff to the lower part of the door. The stick should be long enough to reach to the opposite lower corner of the door opening. When the stick is so placed, the door cannot blow shut. If the stick is in the way, drive a large nail just under the door sill for the stick to rest on. The stick enables the door to be pulled to without leaning out of the mow. When the door is closed, the stick swings up and is fastened as shown by the dotted lines.—R. L. Scharring-Hausen.



Button for Holding Door Open



Stay for Holding Door Open

The farmer who sells his crops or neglects to save and use the manure produced on his farm must understand clearly that he is removing from his land each year a certain amount of plant food constituents which must surely be restored sooner or later if a productive soil is to be maintained.

Neglected Fence-Rows and Road

A very true saying, one often hears, is that a person is known by the company he keeps. This doesn't always mean only the people with whom he associates; it applies equally as well to his stock, crops, and buildings. This fact shows up during this part of the year in the care and attention given the fence-rows.

Traveling thru nearly any section of the country, we see neglected fence-rows. Sometimes we pass them, remarking that possibly they belong to some shiftless tenant, and then prophesy to ourselves that he will never own a home of his own. While this sometimes is true, too often the farmer-owner is just as slovenly. Whether the person is overworked, or otherwise rightly kept from keeping his fence-rows clean, we never stop to consider, but class him at once as an undesirable neighbor. Besides reflecting on the individual, the neighborhood also suffers; for, where unkept roadsides and fence-rows are common, the conclusion is soon reached that the community is either a "has been" or a "won't be." Some people seem to think that if things are kept clean in the vicinity of the buildings there is no further need, as people will not take notice. They forget the neighbor across the line, and the roadside at the rear of the farm.

Besides "showing up" the man, the dirty fence-row or roadside is a constant menace to the whole community, as it harbors noxious animals, plant diseases and harmful insects, as well as acting as a distributing point for all the weeds in that section. Even if the person doesn't care for himself, he should consider others around him and take steps to abolish such common nuisances. Weeds and shrubbery when cut during the dry period of late July and August seldom start up again, as their growing season is about over, while the young seeds (if formed at all) will seldom germinate, as they are not far enough advanced towards maturity.—C. Randolph Kahler, Lycoming Co., Pa.

FERTILIZE WINTER GRAIN

Don't persuade yourself that fertilizer is too high in price to use on wheat and rye this fall. A bushel of grain will buy more fertilizer than it did before the war. We need more bushels, but our rotation and the shortage of labor will not permit much of an increase in our acreage. The best solution is to raise more bushels per acre. Get the best seed obtainable, prepare the land as well as possible, and then fertilize for a bigger yield.

Well fertilized potato land probably will not need much more to grow a good crop, but on other land 300 to 400 pounds of 2-10 or 3-8 fertilizer will pay; especially where press of work, weather conditions, or fear of the Hessian fly makes seeding late. We need a good top-growth before winter, and a nitrogenous fertilizer will help wonderfully to secure it. Where manure has been applied for the grain, 300 pounds of acid phosphate is still profitable, since the manure is low in the phosphoric acid which stimulates vigorous root growth and promotes a heavy yield of well-filled grain. Poultry manure contains little besides nitrogen; it stimulates a quick, rank growth, but should always be reinforced with acid phosphate at the rate of one part of phosphate to five of manure.

Do not forget that you are fertilizing the grass and clover crop as well as the grain. It takes a rich soil to grow two crops at the same time, and liberal fertilization and manuring is insurance against failure of the grass seeding. The grass will not allow any of the fertility to be wasted.—From Camden Co. Farm Bureau.

Weak Points in Farming—IV

Organization the Need of the Farmer

"In union there is strength." Most of us have heard these words so often that they have lost their meaning to us. Yet they point the way to the solution of three great problems confronting the American farmer today—lack of publicity, need of political power, and want of proper business methods. The keynote of success today is "organization." There are business leagues, bankers' associations, and labor unions. We feel the enormous power of the unseen forces of capital, and we see how labor has fought for better working conditions, shorter hours, and bigger pay. A single workingman would have very little chance to better himself, but the voice of the "union" is listened to in very high places indeed. Recently nine thousand men in Toronto went on a strike over the question of more pay and a six-hour working day!

The farmer has been slow to organize for several reasons. The nature of his work makes him less dependent upon others than does that of most city enterprises. He is naturally conservative. He works as a small and scattered unit; not in as close contact with his fellows as the city workman. But conditions are constantly changing, and it is apparent that the farmer must organize to compete successfully with the forces and problems he is compelled to meet. Just how to organize is the problem at present.

The germ of a farmers' organization exists in the county farm bureaus, in the Grange, in the various cooperative associations, or in some form of a farmers' union modeled after the labor unions, from the "local" to a national federation. Just what form it will take remains to be seen. It is certain to be national in extent, broad in its scope, and powerful in the affairs of our country. There is no doubt that organization, and organization alone, can secure for the American farmer the political and economic advantages which he today does not possess, but which are his by right.—R. L. Scharring-Hausen.

Liming Potatoes. Land Will Be Sown to Wheat and Clover

Current Comment

By Father Penn

Marl and Lime

A farmer in Blair County, Pa., has purchased some marl, paying six dollars per ton for it, and wishes to know whether marl is as good as lime and whether he paid too much for it.

Marl is a mixture of calcium carbonate and clay. Loosely speaking, it includes all calcareous deposits. Green sand marl, however, is not calcareous, but is largely iron potassium silicate. The latter is found in New Jersey. It is altogether likely that the kind the subscriber has bought is the first—calcium carbonate mixed with clay.

The lime in marl is the same as that in raw limestone and is equally good for soil use. Its value depends entirely upon how much lime the marl contains. This varies greatly and the buyer should know what percentage is guaranteed before purchasing. The percentage and price should be compared with ground limestone. Under ordinary conditions it would not seem to be a wise move for a farmer in a limestone country, such as that of the inquirer, to import marl from any great distance because of freight costs. The price named, $6 per ton, would seem to be a prohibitive one.

Disheartening Experiences

It is often surprising to see how people "come back" after receiving what seems at the time to be a knock-out blow. The loss occasioned by the excessive rains of July in about a hundred counties of the Middle Atlantic States is immense. Farmers anxiously watched the skies with dwindling hopes for two weeks as they saw the remainder of their half-gathered harvest wholly or partially destroyed.

But there is something in life in the country which spontaneously renews hope. Probably the farmer unconsciously imbibes from Nature the spirit which never acknowledges defeat, but which begins the work of renewing almost before the injury is completed. So, the successful farmer spends little time in crying over spilled milk, but goes to work with renewed purpose to cover the loss, and he always finds Nature loyally standing by to lend her aid in preparing for and growing a new harvest.

How Much Wheat?

No doubt many farmers are still undecided as to how much wheat to sow this year. What will be the probability of getting sufficient farm labor next year? How will the termination of a fixed price likely affect the market? Will it pay to sow it under these uncertainties and apply fertilizer at the present prices? These are legitimate questions and without the stimulation of patriotic appeal may be so formidable as to discourage some farmers from putting out the usual acreage, especially in the sections where the crop was partially ruined this year. This crop must be planned farther away from marketing time than most crops and requires long-range guessing.

A careful analysis of the present situation, however, seems to indicate a continued good demand and consequently a fair market for wheat. The present world-crop is below the world's needs, and the Wheat Director has expressed his opinion that even if the guarantee were removed that the price would now go above the guaranteed price. Any wheat crop which is likely to be harvested in 1920 is almost sure to find a ready market. As to the cost of producing it—that is more uncertain. However, in spite of the general effort to hammer down the price of farm products, it is almost certain that the price of food will move up or down in sympathy with the prices of other products and labor, and that the farmer's returns will be upon a fair comparative basis. It would seem, then, the sensible thing to plant the usual amount of wheat for next year's harvest.

OATS ABOVE THE AVERAGE

While the indicated oats crop is about 250,000,000 under last year, the acreage is less, on account of the expansion in winter wheat and spring wheat seeding in the big portion of the belt. The yield per acre is less than for the past few years, but above the average. The crop was affected by the same influence as the winter wheat, and with the exception of the far southwest, suffered material damage from late seeding, the seasonable ripening period coming when the grain was small and causing a light yield. The large acreage in the northern portion of the country may suffer some additional damage. The harvest is more than three-fifths completed over the country, so that the final production will not be materially changed from that indicated by the current reports.

Many farmers still follow the old custom of plowing down manure for wheat. Careful tests have shown that top-dressing the ground after it is plowed and disking manure into the soil is better for the wheat crop and also for the grass crop.

Farm Products Prices and Prospects

THE WHEAT CROP

Winter Wheat

Delaware and Maryland.—On the Eastern Shore and in Southern Maryland especially, wheat suffered serious deterioration while still in the shock, as the grain, due to excessive rains, has sprouted and grown all over the shocks. Where the grain has been threshed the yield is in most cases very disappointing and the quality of the grain is poor, shriveled and light.

West Virginia.—Not yielding as well as farmers first expected.

North Carolina.—Mostly threshed. Some reports of sprouting in shock, due to continued dampness.

Ohio.—Yields not coming up to expectations in some localities, but in others the crop is turning out better than was expected two or three weeks ago. Yields reduced due to scab in some sections. Much threshing still remains to be done.

Indiana.—Threshing in full progress in all sections with yields running about average; quality is only medium.

Illinois.—Threshing is slowing up as elevators, warehouses, mills and storage bins are full in nearly all sections and there is a great scarcity of cars to move the grain. Weather has been ideal for threshing, but grain is now standing in the shocks nearly everywhere, quality being impaired and yields reduced. Yields continue to run rather smaller than expected.

Michigan. — Threshing is making rapid progress. Yields are exceptionally good. Quality is good except in Wayne County where grain is said to be badly shrunken due to rust.

Wisconsin.—Harvesting is general. Yield has been cut down to some extent by joint worms, rust and scab, but will average up well with the yield of past years.

Iowa. — Practically all cut and yields as so far reported are very disappointing. Fields range from good to hardly worth cutting.

Missouri. — Threshing, except in the northern section, is progressing rapidly. In some counties the yields are better than expected, while in others they are very disappointing. The quality does not come up to the new grain standards in many places.

Nebraska.—Very favorable weather for threshing. A considerable decrease is expected in the production estimate.

Tennessee.—Threshing about over. Quality low, with one of the lowest yields of atraw on record.

Arkansas.—Yields thus far very discouraging. In the northeastern section the average seems to be from 5 to 8 bushels. Rain at blooming time is the usual cause assigned. In the northwest section the yield promises apparently something like 11 bushels. Straw is unusually large, but the heads did not make over two grains to a mesh, and this largely explains the low yield.

Idaho. — Harvest general. Yield varies greatly. Well formed fields going as high as 40 bushels; quality good, testing high.

Washington. — Harvesting quite general. Yielding remarkably well considering the season. Many districts averaging 30 to 35 bushels, testing 58 to 61. Color good. Several fields have been burned and 1,000 acres, estimated at 30 bushels per acre, burned this week.

Oregon.—Harvest well under way. Considerable grain threshed on lighter soils. Yields better than anticipated shortly before cutting began. Quality about average.

Spring Wheat

Ohio.—Outlook very poor, due to unfavorable weather conditions.

Indiana.—Almost a failure in some localities. Did not do well in the central and southern sections. Headed out on short straw and is very thin.

Illinois.—Does not look well on the whole. Straw short and thin on the ground. Heads short and generally not very well filled. Scab is exceedingly prevalent.

Wisconsin.—Damaged severely by the hot weather. Heads had started to fill a week ago, but the size of berry will undoubtedly be cut down by the hot weather and hot winds. Grain is also badly rusted. Average height of stalk is around 36 inches.

North Dakota.—Outlook dropped below average since last week. Yields will be below expectations. Kernels small and heads not filling well. Quality only fair.

Nebraska. — Very disappointing yields and the next estimate will be lower.

Idaho.—Harvesting in early sections. The crop will be good on irrigated land, but yield below average. Most sections had sufficient irrigation water to make the crop.

Washington.—Continued hot weather caused deterioration. Much will be cut for hay.

Oregon.—Crop will be very light. Relatively small acreage, however.

FORECAST OF PEACH SHIPMENTS

The prospective commercial peach crop of 30,082,000 bushels, forecast July 9 by the Bureau of Crop Estimates, United States Department of Agriculture, appears liberal beside the very light crop of 20,000,000 to 21,000,000 last year, but the present crop is moderate when compared with those of recent years. Probable shipments appear more limited when it is considered that fully half the crop, or over 16,000,000 bushels, is credited to California, says a report from the Bureau of Markets. Nearly 90 percent of the California crop is commonly used for drying and canning, which would leave only about 3,600 cars to be shipped as fresh fruit. Actual shipments may equal 4,000 cars. In previous years the California crop has not been over one third the total. Georgia, the leading southeastern producing section, according to early indications, will ship 7,700 cars, including 3,000 cars of Elbertas, compared with 8,400, last year's totals. Arkansas, leading in the south central section, may ship 3,200 cars, or nearly half as many cars as Georgia. Oklahoma is likely to become a fairly heavy shipping section for the first time, with possibly 800 cars. New York, usually the heaviest shipping state of the northeast, may have twice the very short rcop of last year. The forecast of carlot shipments is 31,000, compared with 15,903 cars shipped last year.

WEATHER AND CROP CONDITIONS IN PENNSYLVANIA FOR THE WEEK ENDING AUGUST 4, 1919.

The weather for the week was seasonable and pleasant and generally very favorable for crop growth and development. The temperatures were moderate, and light to moderate showers furnished ample moisture except in a few places. There was some damage by local storms, but nothing of much consequence. The sunshine was ample and very beneficial.

Corn continues in good to excellent condition and is growing and developing rapidly. It averages better than last year and is generally very promising.

Apples and peaches continue to drop from the trees in most places, and the general outlook is poor. A few correspondents say the fruits are fair to good. Blackberries are ripening and are plentiful.

All grass lands are in better condition than is usual at this time of the year, and the prospects for the second cutting of hay are excellent. A few places need rain, but such areas are not large.

Oats harvest is about completed and threshing has begun in a few places. Much of the grain was damaged by the heavy rains of last week, and is dark in color. The yield will be fair, but probably a little below the average.

Early potatoes continue to yield light. The late crop was helped in most places by the heavy rains, and is generally promising.

Threshing continues, with good results from rye and generally poor from wheat. Plowing and preparation of the ground for fall seeding are in progress in all parts of the state.

Tobacco is in fair to good condition, and promises about an average crop. In some places it is a little backward.

Late truck has improved and is mostly in good condition. The week as a whole was very favorable for gardens and truck crops. Celery, cabbages, beets, carrots, turnips, etc., are doing very well.

NEW YORK FRUIT CROP REPORT DISCOURAGING

The orchard fruit crop in New York state this year will be small. This is the conclusion of all who have investigated crop conditions. Unseasonable weather in April, fungus disease and insects have all aided materially in reducing the yield and injuring the quality of fruit remaining on the trees.

In his annual report on fruit crop conditions, just issued, Secretary Edward C. Gillett, of the New York State Horticultural Society, gives figures showing that not in years have prospects been so poor for a fruit crop in the state as this summer. Basing the percentage upon a ten-year average, fall apples will be a 41 percent crop; winter apples, 34; cherries, 24; pears, 35; plums, 33; peaches, 50; quinces, 70. The grape crop promises to be large, Columbia County reporting a 122 percent yield, Chautauqua, 90; Dutchess, 92; Ulster, 91; Orange, 100, and Yates, which includes the Lake Keuka grape belt, 80; the state average veing 87 percent.

Hudson Valley fruit prospects are much better than those of Western New York. The Ontario Lake fruit district, comprising the counties of Wayne, Monroe, Niagara and Orleans, averages 28 percent. Genesee, Ontario, Yates, Seneca and Cayuga, extensive orchard counties, average only 25 percent. The Hudson Valley average is 56 percent.

The state crop report shows 62 percent bean acreage, but according to Secretary Gillett, the larger commercial bean growing counties have an acreage of only 40 percent. A 100 percent acreage of potatoes has been planted, and an 80 percent cabbage acreage is reported.

A hailstorm visited the Lake Keuka grape district on July 10, destroying grapes, small fruits and other crops estimated to be worth $250,000. The pear crop in Wayne County was also badly damaged by hail on the same day.—E. E. R.

CROP PROSPECTS IN ENGLAND

The sequence of extremes in rainfall and drought, from the wet and sunless autumn of last year to the prolonged drought of 50 days in May and June this year, has had a very bad effect in the development of the crops of England. The crop returns from all over the country are the most discouraging recorded for at least 25 years.

The wheat prospects are very low in some districts, and the English average is only 88, as compared with 96.66 last year. Barley prospects are equally poor, and in many districts the average estimates amount to only one-third of a full crop. The oat outlook is likewise disappointing, as the average falls below 70 percent of a full crop.

The bean crop, on the other hand, has advanced from the lowest place, two years ago, to second place this year. Peas are variable, but, on the whole, are not so well developed as the beans. Root-crop prospects are also bad. The hay crop, it is estimated, will be only 60 percent of normal.—Commerce Report.

FOOD CONDITIONS IN ENGLAND

As an indication of the shortage of foodstuffs in England, the following excerpts have been taken from a recent report to the Bureau of Markets from Mr. Edward A. Foley, Agricultural Trade Commissioner at London:

"I find food much scarcer in England than I had anticipated. Butter and eggs are so scarce as to be practically off the market. Altho the sugar rationing cards have been recalled, the supply is inadequate. At my hotel one lump of sugar a meal is allowed. A small piece of margarine, which must last for the day, is served at breakfast. Fish is very much in evidence at all means and the portions are large. On the other hand, meat portions are very small."

The Voice of the People

This department is reserved for the use of our readers to discuss all problems and matters of general interest. Write your views and comments briefly on any question of social, economic or educational importance and thus share them with others. It will be necessary to limit such articles to 200 or 300 words. Publication of an article in this department does not signify editorial endorsement.

POWER OF ORGANIZATION

In Pennsylvania Farmer of June 21, I notice that a subscriber from Susquehanna County takes a decided stand against the rights of farmers to organize in the selling of their products. He says that he has farmed all of his life and that his sympathies are with the farmers. Try as I may, I cannot conceive of a practical farmer with a viewpoint like his. He may have farmed during his entire lifetime, but he has never had to earn his living in that manner or he would take at least a reasonable view of his alleged occupation. F. W. D.'s views resemble those of some of our socalled farmers in this section, who live on a farm—nothing more. They worked in the munition factories and shipyards during the war. Now that the fear of conscription is over, they are back again with ideas much like those expressed by Mr. D. They are constantly arguing that the farmer is getting it all, that he is starving the poor laborer and that he is a profiteer. They never allude to their activities during the war when they demanded $8 to $10 for six to eight hours of labor.

Our friend says that a law which exempts any class of people is unconstitutional and falls under the head of class legislation; and that farmers should have no privileges that are not enjoyed by other classes of citizens. Does he overlook the fact that our antitrust laws have always exempted the labor classes? Labor of all descriptions has organized to fight for their own interests —higher wages and shorter hours. They have conducted organized strikes, both for individual interests and (in case of sympathetic strikes) to help workers in other unions. Yet they have not been prosecuted for violation of the antitrust laws. I see no difference between the sale of labor itself and the sale of the products of labor by the producer. To use his own argument, isn't the farmer just as much entitled to this exemption privilege as the shop hand or the hodcarrier?

The antitrust laws do not keep the union laborer from setting the price for his labor, and why should it keep the farmer from organizing to secure a decent living from the products of his labor? Mr. Dean does not believe in discrimination, but he will find something interesting if he will follow the Chicago milk situation a little further. It looks a little queer to say the least that the case against the big Chicago packers is dropped while these farmers, who were getting less than butter prices for their milk, should be prosecuted.

Does not the producer have the right to set the price of his product above the cost of production; or must the dairyman allow the high-paid iron worker, the government office seeker or the bee keeper to set the price? Must the wheat farmer sell his wheat to the miller only because the miller has a large investment, or to the middleman who offers small service at a large cost, when he can cut out the cost of both by selling direct, either by himself or thru a co-operative selling organization? Surely the farmers are not compelled to patronize every class of middlemen who exact their toll regardless of the service they render. —C. R. Kahler, Lycoming Co., Pa.

SCHOOL OPPORTUNITY

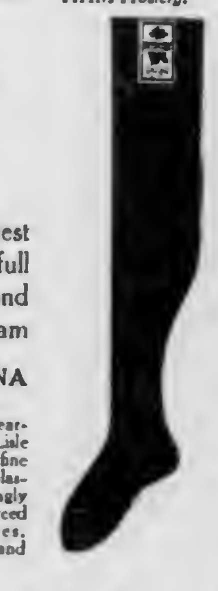
The State Department of Education of Pennsylvania has secured the passage of a bill giving appropriations that put good schools within the reach of nearly all rural people. The question is, will the effort be made by those upon whom the initial responsibility depends? Township school boards and leading citizens have the opportunity to add a sum not out of proportion with resources to the funds already spent in scattered half-attended and half-supported one-room schools, and then they will receive from the state and federal governments sufficient help to have the very best. By the very best schools I mean centralized ones where efforts and interests are concentrated under the roof of one building or group of buildings.

The exact nature of this school plant is a matter for study and investigation by the people concerned. Consequently in our township, where money does not grow on bushes, but where education is valued in spite of scattered population, the people are planning a one-day automobile excursion to two successful centralized schools in similar communities in adjoining counties. A similar party of school teachers, directors and citizens could be started on the same mission in almost any locality. Seeing is the biggest step toward believing. Up-to-date schools will make the people spend their tuition money at home, keep the farms populated, the churches filled with young voices, make everybody more contented and happy, and there will be more prosperity in local stores, mills, shops or other lines of business.

There are greater reasons than money values for keeping rural children under rural and home influence during the high school age. The latest bulletins and laws on rural schools can be gotten by writing to the State and Federal Departments of Education. They tell how to get some farm taxes back home.—Wm. J. Watts, Clearfield Co., Pa.

THE KENT COUNTY AWAKENING

I am glad to see that Kent County, Del., is waking up. Your article on page 1 of July 26 tells about it and how until recently "the farmers and fruit growers marketed their products as their forefathers did." But now, under the direction of the only stranger in the county, they have learned a more excellent way. This note is to remind your readers that Kent County has had the benefit, in past years, of the Fruit Exchange, the Delaware Produce Association, the Grange and other organizations that were strong in their day. Now the only one left is the Grange, which is still the strongest co-operative association in the state. The Exchange went out for lack of continued co-operation. If the present co-operative association is to continue it must prove its usefulness by service.—D. E. Esysh, Kent Co., Del.



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PHILADELPHIA, PA., AUGUST 16, 1919.
VOLUME 46 NUMBER 7

Our job is to serve our readers. Whenever and wherever we can help you, write us.—The Editors.

Organization Needed

THERE was never greater need of wise and effective organization among farmers than at present. The primary issues now before Congress—the cost of living, the railroads, the packers—are all of primary importance to agriculture. Congress will act upon these measures according to the facts laid before it by its affected constituents. Manufacturers, shippers, bankers, laborers, and practically all great classes of citizens are organized and prepared to see that their interests are properly presented. Such representation is proper so long as the privilege is not abused, and it will not be abused if all fundamental interests are equally represented. Farmers are better organized now than ever before. But they need all the organized strength they have got, and more. Now is the time to affiliate the smaller bodies into one central organization that shall be truly representative of all farm interests and be in a position to speak for all. And the effort of such central body must be toward broad-gauge, constructive policies of national welfare and not for class division or class privilege. No one can doubt the critical nature of the national issues to be dealt with in the next several years. Those issues must be solved on the broad basis of national welfare or all classes will suffer. The farmers have always supplied the bulwark of conservative national strength. Properly organized and honestly represented, they will not fail now.

The Job Ahead

IT IS estimated that by the end of this year our national debt will be about thirty billion dollars. This is nearly one-eighth of our supposed national wealth. It means a debt of $275 for every man, woman and child in the United States, or $1,375 for every family of five. The annual interest on this amount will be $9.38 per capita, or $46.90 per family, and according to past experience this may continue thru many decades. About nine of the thirty billions mentioned is in loans to the Allies which may or may not be paid. At least, most of it will be a long time coming because of the poverty and chaos prevalent in European countries.

However, there is no use in spending our time in bewailing the situation. The debt is to be paid; there is no way of evading it if we would, and the sensible thing to do is to devise ways and means of raising the money that will be just and fair to all and as little of a burden to any as possible. This will require the most earnest thought of all our citizens and a sharp lookout that tax, revenue and assessment laws are not enacted that will not excuse some and double up on others. A great deal of injustice has occurred in the past because so much intangible wealth has been allowed to escape tax, or at least with a small amount. A farmer some years ago figured that if he paid tax proportionately with Jay Gould he would be paying $1.24 annually instead of $50. The people must needs be on the job and watch all proposed legislation on the subject of tax raising and use the voters' privilege and strength to compel lawmakers to deal justly with all industries, and use it irrespective of party affiliation.

Another place where the voters' sentiments should be felt is in the expenditure of public money. Everyone knows that extravagant and often dishonest use is made of the people's money. This extends all thru the line of township, borough, county, city, state and national treasuries. Too often the public conscience is mean enough to be salved by the sop of a public building, a hospital, or a dredged creek in their district, and in this way untold millions are expended unnecessarily. A wise individual or firm cuts out luxury and extravagance in times of stress, and this nation must do the same if it is to pull thru easily. It can be done if the people will insist upon it and blacklist every extravagant, unfair or dishonest official.

The Tottering Tower

THE story goes that ancient humanity attempted to gain Heaven by the shorter but unlawful way of a tower. But confusion developed among them before they accomplished their aim and the whole thing fell thru—a natural consequence, because the project was not only unlawful but impossible as well. Not only was the labor and material wasted, but the purpose and the effort expended in this work so destroyed the people's sense of right and justice that, later, the whole city was destroyed and the people dispersed.

In all probability the plan was in the nature of a spiral staircase in which, as is well known, each succeeding and higher step rests upon the one next below and as steps are added the structure becomes higher and higher until the desired height is reached, or, until the thing becomes top-heavy and falls with a crash.

Coming down to modern times, we have been building a spiral staircase—economically speaking—by raising prices in order to gain wealth until we have reached a height at which there is not only great confusion, but the structure is beginning to totter. As in the case of the staircase, this height has been reached by adding cost upon cost and profit upon profit, each placed upon the one just below. Every person is satisfied with and justifies the step upon which he is standing, but blames the perilous condition of the structure upon those who made the steps below and above him—hence the confusion. Each agrees that the structure is too high and must be lowered and insists that the "risers" to all the other steps should be cut down, but that his is just right. Stairways are "easy" or "hard" just as the "risers"—the space between the steps—are low or high, and the height which our cost of living has attained was reached by using extremely high "risers" in the shape of profits.

People must climb—hence stairways are necessary; but they should be "easy" and not unnecessarily long nor built to reach impossible heights. Even in normal times business is conducted upon the stairway principle. It holds that each time an article is handled on its way from Nature to consumer a reasonable profit is justified, and business has not always applied the qualifying word "reasonable."

The question of the high cost of living is now at an acute stage. It occupies the first page, and everything else is, for the time being, secondary. Everybody is saying that prices must come down. They were built up naturally and easily and without co-ordinate effort, but to lower them without a crash will require the patriotic and willing co-operation of all parties. If one major industry insists upon maintaining its present prices the thing is impossible, while it would spell disaster for any one business alone to greatly reduce prices. Any move made with special reference to reducing the cost of food without a reduction all along the line with be disastrous to agriculture, and ultimately to every other industry. Any legislation, except that against profiteering, which hits at isolated cases or a particular industry will do more harm than good. Pessimistic as it may seem, if everyone will not agree to accept a lower price and a smaller profit in the interest of the common good, we see nothing to avert a crash. When we get back to earth and start to build a new economic structure we should adopt it as a hard and fast rule to treat "the same as a thief and robber" him who attempts to climb to riches by any other way than industry, honest dealing, and fair profits.

Labor's Railroad Plan

THE railroad brotherhoods forced the acceptance of the eight-hour day principle thru the medium of the Adamson law. They are now attempting to force government ownership of railroads by the Sims bill, now before Congress. This bill is advanced as a practical scheme of government ownership, and it is claimed for it that it has the endorsement of the American Federation of Labor and a large proportion of the farmers of the country. Farmers are vitally interested in the future regulation of the roads. They constitute the one large class of shippers that must bear the freight on what they ship; they cannot pass that charge on to the consumers of their products. As such, they want to know that the roads are to be put into the hands of owners or operators who are fully responsible to the public for services rendered and rates charged. We do not believe that farmers as a class are favorable to government operation after the experiences of the past eighteen months. We do not believe that they are favorable to the kind of government ownership and brotherhood operation that is now proposed.

Briefly stated, the Sims bill provides for the issuance of government bonds for the purchase of the railroads from the present owners at a price that "will return every honest dollar" now invested. It would then have the government turn the management and operation of the roads over to a board of fifteen directors. This board would be made up of five members appointed by the President, five appointed by the operating officers and five by the employes of the roads. The earnings of the roads would be used, first, to pay reasonable interest on the investment; second, to improve the operating equipment, and third, to reduction of rates under a prescribed plan. This plan calls for "an equal division" of surplus profits between the employes of the roads and the general public, after fixed charges and operating costs are paid, with an automatic reduction of rates when the share of the employes in the surplus is more than 5 percent of the gross operating revenues. Other features cover details of extension of service, improvement of roads, etc. It is provided that cost of extensions are to be borne by the communities benefited.

The provisions of the bill are too far-reaching for brief discussion, but outstanding features are obvious. First, the railroads are now capitalized at something more than $19,000,000,000. The courts would decide upon an honest valuation. With a present national debt of some thirty billions of dollars, it requires a real optimist to presume that the government could at this time float bonds to an amount sufficient to meet an honest buying price of the roads; and anything less than an honest price would be confiscation of property which farmers have never advocated and never will. Second, the division of profits suggested provide first for the railroad employes and second for improvement of service for the benefit of the public. Third, the provision for the extension of the roads and service at the expense of the communities benefited will open the way to endless dispute of division of benefits and provide room for unlimited porkbarrel politics. Fourth, with five representatives on the board of directors appointed by the President and the other ten by employes and operatives of the roads, the Brotherhood interests are in splendid position to get all they are looking for in this measure. Finally, there is too much provision for the benefit of those who operate the roads and not enough for the benefit of those who use the roads.

Briefly, the plan calls for government ownership of the roads for the benefit of the operators. This is not government ownership as it has been understood thruout the country. Yet that plan is being strongly urged, and the Brotherhood representatives have stated that they will be satisfied with nothing less. The general opposition to the plan expressed in Washington and by the public seems certain to defeat the plan.

NEW YORK LETTER

Lessons in Dynamiting. — From August 12 to 15 experts will be in the vicinity of Auburn teaching Cayuga County farmers, under the management of the Farm Bureau, the use of dynamite for many farm purposes. Dynamite will be used thruout the country to loosen subsoil to aid in draining. Its use in road work will also be attempted.

Mayors to Buy Supplies.—The governor called a conference of the mayors of the major cities of the state this week, to devise plans for buying and distributing army food and medical supplies for the use of the people, at cost plus transportation. Canned meats and vegetables and sugar supplies offer most attractions. Auburn within a few days will have 80,000 pounds of sugar and large stores of other foods. Syracuse will take even larger stocks, and the smaller cities will be given their share.

Fruit Growers' Tour.—On Wednesday morning fruit growers from Central and Western New York start from Medina on the annual two days' inspection trip of the New York State Horticultural Society. The first part of the trip will embrace Orleans and Niagara Counties, where the fruit yield will be largest this year. The trip will include the Canadian fruit belt, which may eventually offer keen competition to New York growers.

High Grade Barley Discovered.—The two-year test of 100 varieties of barley on the Minard farm in Cayuga County, has resulted in the discovery of a valuable cross originated on this farm. The new barley bears fine large heads on an unusually large stalk and yields five or six bushels to the acre more than other varieties. The cross is between the Manchuria variety and the Champion of Vermont. Several other varieties were found to have extra fine qualities, even exceeding this one. The grain was taken to Cornell College, where special machinery will separate the grain from the straw and the real qualities of the barley be determined.

Cost of Milk Production. — The Cortland County Farm Bureau has forwarded to New York for the mayor's investigating committee, evidence obtained on ten dairy farms of the county showing the cost of producing milk. In every instance the cost was found to be higher than has been believed. The dealers of New York have raised the retail price of milk 2 cents a quart, or $1 a hundred, for August, based on a raise of 20 cents a hundred to the farmers.

County Tour of Potato Fields to Determine Yield. — Prominent agriculturists and farm bureau agents from all over the state, including Long Island and New Jersey growers, will participate in a tour of inspection of Onondaga County potatoes on Saturday. Reports from sections of Central New York generally show the 1919 potato yield to be very poor, due to an unfavorable spring and a hot June. The yield is estimated as not over 70 percent marketable, with poor-looking vines predominating and potatoes not setting properly. Late blight has begun its scourge, and grasshoppers are damaging the leaves more and more every day.

New Co-operative Milk League.—Cayuga County farmers are completing a campaign to raise $600,000 for a new dairy plant, most of the fund having been secured already. At the first meeing over 500 farmers were present and $50,000 was pledged, the meeting closing at 2 o'clock in the morning. The farmers were heavy creditors of the Central State Milk Products Company, which is in financial straits, and they are taking this step to protect themselves from loss in future, and they will market their own products. Efforts are being made to save the business of the former company, which was not able to pay farmers a satisfactory price

Mortgage Tax Receipts. — The state's mortgage tax receipts this year will be about $2,600,000, or 50 percent more than last year's receipts. The number of mortgages in the state increased from 81,456 to 100,548, more than half this being in the Borough of Kings, New York City. A tax of ½ of 1 per cent is imposed on the principal of each mortgage recorded, and is divided equally between the county where recorded and the state. Cortland County, a typical state county, this year benefits by this fund to the amount of $2,208.

Campaign to Enforce Dog Law.—The sheep men are counting on the enforcement of the new dog law, which failed to carry the $150,000 appropriation. There are other funds available, however, and the Department of Farms and Markets, with the state police, and any town or county peace officer who may be appealed to, will attempt to enforce the new provisions. The state is divided into three districts, with an inspector over each. The damage claims will be paid out of the dog license funds, 10 percent of which become immediately available for that use. The tax is $2.50 per male dog, and at any time when 80 percent of the fund designed to pay damages is claimed for that purpose that town or county automatically goes into dog quarantine. Such quarantine may be demanded by petition in any town or county. Fifty years ago there were 6,300,000 sheep in the state; now there are less than 500,000. Dogs are agreed to be the greatest handicap to the sheep industry.

Aid for Drug Addicts.—By recent rulings any physician may now commit a drug addict to a county or city hospital for treatment at state expense. Federal and state officials have been in conference here this week to devise ways to protect those who will suffer because unable to secure drugs under the new law. This is a step in the right direction, aimed to correct a condition which led to the consumption of more opium in the United States than is consumed in China.

Flays Public School System. — A noted educator in a recent address in Auburn calls our public school system very weak, almost a crime in some of its procedures. He advises rewriting our school histories, which are now nine-tenths given to details of wars—slurring over events of progress, uplift and those leading to harmonious relations in the world. He would change all this, have our system strongly state supervised, with no class stratification, and with an entire revision of our present ideas of the value of the dead languages.

Prohibition Decreases Crime.—In New York City, where prohibition was expected to be enforced the most tardily and incompletely of any place in the state, reports show the last month's crimes to be decreased 15 percent, with a daily gain in the decrease that points to 50 percent less is six months. The major crimes, as homicide, rape and wife-beating, are first to show the decrease. A canvass of 25 physicians of the city showed only one prescription of alcohol during that time.

NEW JERSEY NEWS

Pomona Grange Picnic.—The Pomona Grange picnic of Mercer and Monmouth Counties was attended by Governor William N. Runyon and Comptroller Newton A. K. Bugbee, a Republican candidate for nomination at the primaries for governor, at the annual picnic of the grange held, at Springdale Park at Yardville. J. C. Ketchum, treasurer of the National Grange, and W. H Havens, master of the New Jersey State Grange, were among the speakers on agricultural topics to a host of farmers attending the affair. Farm and agricultural experts from various parts of New Jersey, Pennsylvania and New York were present.

Visit Corn Plots.—A new feature of the Acre Corn Contest, which is being participated in by boys in Mercer County for prizes offered by the agricultural organizations, banks, etc., was a visit to all of the plots during the week by some of the leading agriculturists of the county, who, with the boys, looked carefully over the growing corn. A basket lunch was enjoyed at Pennington and supper at the farm of J. H. Hankinson, Glen Moore, where some of the finest peaches in the State are being raised. While on this farm the boys participated in a trip thorugh the peach orchards.

Potato Wart Disease. — The New Jersey Department of Agriculture sent out a warning during the week to beware of the European potato wart, which has made its appearance in a few places in Eastern Pennsylvania.

Irrigation Plants. — Irrigation plants are very popular at the present time in some parts of the state, and growers of produce who have their farms or gardens equipped with the spraying systems are obtaining big returns by reason of the high cost of fruits and vegetables. There was little need of the irrigation systems during May, but June brought a dry spell, and many of the truck growers operated the systems day and night to the advantage of their produce. Because of irrigation, many of the growers anticipate having crops ready for the market a week or two in advance of their neighbors who have to depend upon the rains. Some of the truck growers in South Jersey have made enough profits from lettuce, spinach and other early vegetables this year to pay for their irrigation plants, while growers of fancy strawberries, which are now grown largely under irrigation, have struck a regular bonanza in the record-breaking prices now prevailing for this fruit.

PACKER CONTROL BILL

Statement of Senator John B. Kendrick, of Wyoming, Explaining the Kendrick Bill to Control the Meat Packing Industry.

The economic growth of the country has demonstrated beyond the peradventure of a doubt that whenever private business reaches such proportions that a single enterprise or a small group of correlated enterprises has become national rather than local in its scope, the government must assume some form of control if the danger of abuses is to be eliminated.

It was the recognition of this fact that prompted the enactment of the anti-trust laws, the interstate commerce law, and in effect also the law establishing the federal reserve banking system. The public interest in these great businesses transcends state lines, and if the public interest is to be adequately protected, the protection must be furnished by an agency that is at least as far-reaching and as powerful as the private business involved. There is no such agency, of course, except the Federal Government.

With regard to the meat packing industry, no one, I think, will deny that it is not only national but international in its scope, that a few private individuals commonly known as the big packers do by far the great bulk of the business, and that this concentration of control was gained in the past by practices which the packers themselves acknowledge were questionable. The history of the development of this industry shows a steady trend toward monopoly and monopoly of the gravest sort, for it affects the food supply of one hundred and ten millions of people.

From the time the elder Swift and the elder Armour saw the opportunities of this business and began to take advantage of them, there had been no interruption of the trend toward monopoly and the elimination of competition until scarcely a year ago, when the growing public demand for investigation had the effect, so to speak, of applying brakes to the industry. It is no reflection on the gentlemen who control the packing business to say that if the effects of public sentiment should be allowed to wear off without legislation, the industry would relapse to its former condition and there would be a real danger of a resumption of the abuses which everybody recognizes existed in the past. That is merely human nature. Power already breeds the desire for more power, and the only safety for the country lies in the enactment of legislation which will insure competition and prevent monopoly.

The time has come when men of large vision realize that great wealth and great economic power constitute in fact a trusteeship to be exercised for the welfare of all. Just as political power cannot be allowed to repose in uncontrolled and arbitrary hands, so economic power must also be subjected to control. We can no more trust to the benevolent despot in big business than we can in government.

It is in an attempt to solve this problem that I have introduced the bill for federal control of the meat packing industry. I have no desire to hamper industry or kill private initiative. I have no quarrel with any business simply because it happens to be big or wealthy. The aim of the bill is not to punish the packers nor to destroy their business, but merely to protect the public in the future and to afford a government guarantee that neither by the influence of the great wealth of the packers nor by gentlemen's agreements among them shall competition be discouraged on the one hand or crushed on the other.

The food market must be free. It must be free for the producer and it must be free for the consumer. There must be no possibility of suspicion that it is within the power of the packer to control prices to his own advantage, that he can of his own will increase the cost of a single pound of beef to the poorest inhabitant of the largest city in the land, or drive down the price to the smallest producer of livestock on the poorest range in the country.

This end, the bill which I have introduced aims to accomplish by three-fold action. In the first place, it establishes a licensing system whereby all the great firms and agencies which are engaged in the preparation of meat products in interstate commerce must obtain a federal license. The price of this license is honest dealing and good faith. As long as the packer deals fairly with his competitor and his patron, as long as he refrains from unjust practices, he need fear no interference. But if he should overstep the mark and resort to any of those conspiracies and abuses which were so frequent in the past, he will do so under pain of losing his license. Great care has been taken in drafting the bill to see to it that the rights of the individual or the corporation which takes out a license shall be protected, so that, if the licensee feels himself aggrieved he may have his day in court.

Secondly, the bill aims to free the producing market by requiring the packer to dispose of his ownership of the stockyards. In other words, he may not own the market in which the producer must sell his product. In enforcing this phase of the bill, ample time is given the packer to divest himself of the stockyards' interests without financial loss.

Finally, the bill aims to insure competition in the consumers' market by making refrigerator cars common carriers. These instrumentalities of commerce are so necessary to the transportation of the nation's food supply that they should be made available on equal terms to all alike.

I am aware, of course, that the packer criticises this program on the ground that he built some of the stockyards and developed the refrigerator car in order to make his business more efficient. The argument might be a good one if there were nothing involved in the problem but the rights of packers and their potential rivals. But the problem is bigger than that—it affects the rights of the public at large. Before this paramount sovereignty the packer must yield. He has had his reward for his enterprise and his originality. He has waxed enormously rich. These instrumentalities of which he is so proud have become sources of danger to the public, because in his hands or in the hands of his successor they may easily be used for oppressive purposes. Therefore, he must submit, for the public good, to public control.

FARM MEETING CALENDAR

Pennsylvania Tractor Demonstration, Butler, Pa., August 21-22.

Williams Grove Picnic, Williams Grove, Pa., August 25-29.

Vegetable Growers' Convention, Detroit, Mich., September 9-13.

New York State Fair, Syracuse, N. Y., September 8-13.

Interstate Fair, Trenton, N. J., September 29-October 3.

National Dairy Show, Chicago, Ill., October 6-12.

National Grange Meeting, Grand Rapids, Mich., November 12-21.

New Jersey Horticultural Society Meeting, Atlantic City, December 2-3.

Peninsula Horticultural Society Meeting, Chestertown, Md., January 6-8.

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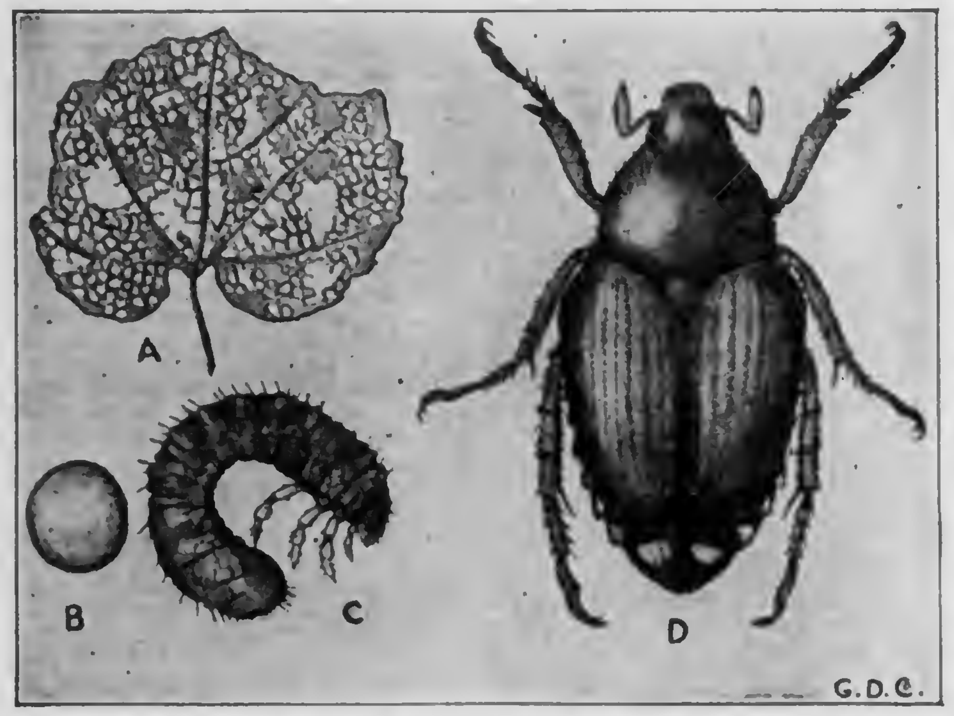
HORTICULTURE

RIPENING DATES FOR FRUITS

By J. P. STEWART

It is often very important for a grower to know some time in advance as to just when his different varieties of fruit are likely to be ready for picking. This information is especially valuable in the case of peaches, as they have to be handled so promptly in order to avoid loss. It is also useful in planning the work, ordering cars, advising buyers of probable dates of shipment, etc.

In spite of the general usefulness of such informtaion, very few growers keep the necessary records to enable them to predict the probable picking dates in their own orchards. While this is the case generally, we have recently found an important exception in one of the best kept orchards of the Cumberland Valley.



Japanese Beetle Introduced Into New Jersey
A, leaf showing feeding; B, egg; C, young grub; D, adult beetle. (A, reduced; B, C, D, enlarged)

This orchard is located near Scotland Station in Franklin County, and the dates recorded in it since 1910 may be of value to many others in the same general latitude, while still others may be able to adjust the records to suit their conditions by noting the approximate difference in ripening dates shown by the earlier varieties.

In this orchard, the Carman peach has begun to ripen from July 26 in 1919 to August 3 in 1910, with the other years intermediate, but mostly starting around August 1. It has finished ripening in about six to thirteen days thereafter. The Hiley during the same period has ranged from August 12 to 16 in earliest picking, with the completion of picking about five or six days later. The Champion has ranged from August 16 to 21 in starting and has finished about five to seven days later. The Niagara has started about the 20th to 21st of August and finished in about four to seven days. The Belle of Georgia has begun about August 21 to 23 and finished in three to eight days.

The Elberta has begun ripening from August 22 to 27 and has finished in eight to fourteen days. The Fox Seedling has begun September 3 to 7 and finished in about five to eight days. Crawford Late has begun August 25 to September 3 and finished in five to thirteen days. Matthews began about September 7 and finished in about seven days. Smock began about September 13 to 22 and finished in seven to twelve days. Heath Cling began September 21 to 24 and finished in six to thirteen days. Tolway began September 24 to 27 and finished in about four to nine days.

With this series of ripening dates as a basis, one should be able to make a fairly close schedule of the ripening dates in his own orchard for the remainder of this season, by noting the deviations from the present schedule which have already been shown by his earlier varieties. This approximate schedule can then be corrected by the actual dates shown by his varieties as the season advances, and thus a start can be made for securing definite information of this kind for the orchard immediately concerned, which eventually will of course be most reliable and satisfactory.

Campaign Against the H. C. L.

It is interesting to note that the current campaign against the "high cost of living" is being started just about the time the farmer has obtained something to sell. In other words, it is being timed just right to assist the middleman and dealers in material by reducing the prices offered to the producers. Whether this in turn will result in any material reduction in the prices charged to the consumer remains to be seen. This is evidently a dangerous situation and one which may seriously affect production next year, if the present producers are now deprived of a reasonable return on their unusual expenses and labors of the current year.

In other words, it may be possible to continue robbing part of the farmers part of the time, but I believe the time for the annual, wholesale action of this kind has passed in this country, if the population is to be fully fed. The sooner this fact is brought clearly to the attention of those in authority and to that of the general public, the better it will be for all concerned.

We agree very fully with the effort to reduce current prices to the consumers, as far as the present inflated state of our currency will permit. But the place to do the squeezing is where the biggest part of the present dollar usually goes, and we believe that any careful investigation will show this not to be the farmer as any general rule. Peaches, for example, are now selling in our larger cities at 3 to 10 cents each, or roughly speaking at about $5 to $15 a bushel, while the best official quoations to growers anywhere in the country on the same date are from $2 to $3.25 a bushel f. o. b. loading point. How much relief would therefore be secured if the present price to the grower were even reduced one-half?

We also believe that the only certain and substantial method of definitely reducing the price of food is to greatly increase production. This is by further penalizing the present producers. It is time that the farmer's needs were also taken into consideration in this matter and a fair return for his labor insured either by maintaining present prices to him or else by securing a material reduction in the fertilizers, machinery, labor and other raw materials required by him in producing the nation's food.

JAPANESE PEST IN NEW JERSEY

A destructive insect known as the Japanese beetle was introduced into New Jersey some years ago with plants imported from Japan. The infestation at present is confined to a restricted area in Burlington County, and State and Federal authorities are co-operating in eradication and suppression work.

The beetle measures slightly less than one-half inch in length, the body and legs being metallic bronze green, except for the wing covers, which are reddish brown with dark margins. It is regarded as one of the worst insect pests of Japan and attacks a very large list of plants. In Burlington County the beetles have been noted feeding on the foliage of apple, plum, peach, cherry, grape, raspberry, blackberry, cantaloupes, watermelons, asparagus, rhubarb, sweet potato and lima beans. It also bores into ears of corn and feeds on various various ornamental plants and weeds.

The insect is most conspicuous and injurious in the beetle stage. It passes the winter as a grub in a cell 6 to 12 inches below the surface of the soil. Early in April the grub works its way up, feeding on living or decaying vegetation in the soil, and becomes mature and changes to a pupa during June. The adults emerge from the latter part of June until August and eggs are deposited in the soil.

In the infested area eradication work consists of spraying, hand collecting, soil treatment with sodium cyanide, clean culture and elimination of food plants in waste places. The shipment of sweet corn from the infested area is governed by quarantine regulations.

LIMA BEAN WORM

Arsenate of Lead Will Kill the Pest

Vast hordes of destructive small green worms have been laying waste the bean fields of the southern half of New Jersey. In Atlantic County some fields are already completely stripped of their foliage. Entomologists of the State Experiment Station, camping on their trail, have dubbed them the "lima bean worms" and are recommending the following treatment for their destruction:

Arsenate of lead has proved deadly to them. For every acre to be sprayed, mix together from four to six pounds of arsenate of lead, an equal amount of freshly slaked stone lime and the amount of water ordinarily used in spraying an acre of vegetables. Spray thoroughly, making sure that the solution hits the undersides of the leaves, as it is here that the worm does its most destructive work.

When the worm attacks pole beans where liquid sprayers cannot be driven between the rows at this season and in gardens or upon small plots the poison can best be applied as a dust. Use one pound of arsenate of lead to five pounds of hydrated lime, applying with the hand. Again, be sure that it hits the underside of the leaf. In larger plots use a blower to distribute the dust.

Caution.—Arsenate of lead is poisonous to man as well as to worm. Beware, therefore, of treating beans the PODS of which are to be used as food.

The worms will begin to die about forty-eight hours after the application, but will not be completely exterminated before four or five days.

This is not the first appearance of the worm in New Jersey, but never before has it come in sufficient numbers to be of any consequence. It has a voracious appetite, and beans of any kind, shape or description, from limas to soys, are equally acceptable to its palate, to judge by the wholesale destruction which has been going on in this state.—New Jersey State College of Agriculture.

SMUTTY SWEET CORN

A Pennsylvania reader says: "I have a patch of sweet corn which is badly infested with smut. I have selected seed ears free from smut. Must I change the location another year?"

Smut is frequently very destructive of sweet corn. It is not wise to select seed from a badly smutted crop. Do not use manure from animals fed on smutty stalks for fertilizing corn ground. Rotate crops. It is advisable to remove smut balls as soon as they appear, carry them out and bury or burn them.—K.

TIMELY TRUCK NOTES

By R. W. DeBAUN.

Leaves Falling Off Peppers

Many of the lower leaves on my pepper plants are becoming covered with rusty brown spots. I expect that in ten days many of the leaves will fall off as usual. Apparently, it is a disease of the pepper crop which has come to us during the last few years. Southern New Jersey pepper growers, including myself, would like to know what practical precautions can be taken to prevent the destruction caused by this disease. After the disease has injured many of the leaves and peppers, it seems to gradually disappear while the plants renew their growth. However, the serious setback greatly reduces the yield and profits.

Observations on the development of the disease have indicated that the condition of the soil has no definite effect upon the amount of destruction. However, each season, when the disease is at its worst, there are usually seen certain plants which are not so seriously affected as the plants around them. Why can't we assume that those plants are naturally able to resist the attacks of the disease? Just as soon as I can get to it I shall stake for seed those plants which are apparently immune and which produce a desirable crop. Then next year the seed from each plant will be used to produce enough plants for a row of peppers. In that way I may find a row of peppers able to resist the disease.

Tomatoes in Demand

It is very probable that there will be a very light crop of tomatoes this season. The early tomato growers in Southern New Jersey have had a very poor year. Their crop was poor and late. Then just as heavy picking should have started there came two weeks of rainy weather. The quality of the fruit was destroyed so that it became too soft and watery for shipment. The market went down so that shipments dwindled. Then just as soon as the tomatoes became red ripe the canners began to buy them by the boat load. At first several boat loads were in miserable condition when they reached Baltimore, Wilmington, etc. Therefore the canners became slow buyers.

Now the reports from all over Delaware, Maryland, New Jersey, New York and Virginia indicate that the canhouse tomato crop has weak, stringy vines and a very light set of fruit. Hundreds of acres on low ground were ruined by the heavy rains, while the blight has already destroyed many of the lower leaves. The growers who have contracted this season will lose many dollars when they deliver their crop to the canners, or else they will have a guilty conscience when they have their neighbor sell a few loads for them on the open market.

Rat Proof Seed Box

Vegetable growers usually waste many dollars' worth of seed because they do not have the proper container for their packages of seed. The bags of seed may lie around the floor, be stuffed into drawers, be piled onto shelves or hang to rafters so rats and mice are attracted to the buildings. The seed is carried away by the destructive animals and the bags are eaten full of holes. Packages of seed are a nuisance for the house to tolerate and what is worse, when the seed is not stored in a certain place it cannot be found when needed. The result is that special strains of seed are mislaid until after planting time or perhaps the farmer orders several kinds of seed of which he already has an unused supply.

An old dry-goods box can be cheaply converted into an excellent seed box by covering the sides, bottom and lid with half-inch mesh wire. The loose lid has a half-inch projection on the edges so as to prevent mice from finding an opening at any time. Now is a good time of the year to throw away the vegetable seed which will never be planted and to prepare a proper container for the seeds which will be saved at home during the season.

DID HIS BEST

Jack—"Say, boy, your dog bit me on the ankle."

Tom—"Well, that is as high as he could reach. You wouldn't expect a little pup like him to bite you on the neck, would you?"—Boston Post.

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ROYSTER'S
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There are many ways of getting more money out of wheat. One of them is the use of Royster's Fertilizer But we are not content with giving the farmer the best plant food that can be made and so have prepared a compact, plainly worded, practical book, called "*Wheat Growing for Profit*," which covers the entire process of wheat culture from the preparation of the ground to the harvesting. This book embodies the best modern thought on this subject and will be very helpful to those who wish to increase their profits. It will be sent free of charge. Write today for your copy, using the coupon below.

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DEMPWOLF'S
FERTILIZERS

TO make the most money on wheat, the soil should be heavily fertilized. With labor so scarce and expensive, it pays to use good plant foods, so that every hour of labor produces two bushels instead of one.

Use Dempwolf's Fertilizers not only to increase the yields, but to insure good, heavy grain—plump kernels—that bring the highest price and furnish good seed. They have been used for years by the best wheat growers of Pennsylvania.

In order to outwit the Hessian fly, wheat should be planted late. The Nitrogen in Dempwolf's Fertilizers enables you to plant late, for it gives the plant a quick start even in cold ground, and enables the crop to resist the ravages of the fly.

Write for full information about Dempwolf's Fertilizers in analyses to suit different soils and crops. We have facilities for prompt shipments, with no congested railway yards nearby. We urge, however, that your order be placed early.

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BLUE
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GUARANTEED MINIMUM ANALYSIS
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ON HIGH FRUIT PRICES

Farmers who are "thinking" about planting, should act this fall—they will save a year's time. With Apples at their present prices of $7 to $10 a barrel, orcharding brings in much more money than general farming.

The demand for fruit trees is very great — have you given us your order? Don't let the time pass—opportunity will pass with it. Write us today; or ask our salesman. You can depend on him.

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Ask yourself, "How will my silo look after ten years?" Then learn the age of some of the thousands of sturdy, good-looking Green Mountain Silos dotted over the country. They "grow old gracefully."

Green Mountain Silos, with the popular new hip roof, are fully described in our interesting new 1919 folder. Write for free copy today. You'll always be glad you did so.

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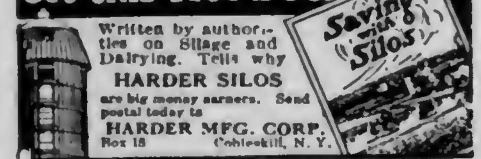

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The Well-Grown Calf

Methods of Feeding That Produce Weight Required in Good Cows

By E. J. PERRY, County Agent, Tioga Co., Pa.

From five to seven million dairy calves must be raised in this country annually. It is estimated that of this number about one-third prove unsatisfactory at maturity because of their low producing qualities. Since this fact means a great financial loss, it behooves dairy farmers to give more serious consideration to, first, the selection, and, second, the rearing of the calves which are to constitute the future herd.

Increasing thousands of dairymen are today realizing that only those calves by a pure-bred sire of high producing ancestry are good enough to retain, and, furthermore, those calves should be from good producing dams. But in many sections of the country where this is being practiced, these well-bred and well-selected heifers coming into milk fail to make a creditable showing, mainly because they are poorly grown. This is especially true in those territories where the whole milk is sold to the condenseries or is shipped as market milk.

The writer recently accompanied two officials of the Dairy Division of the U. S. Department of Agriculture in their attempt to locate a carload of young grade Holstein cows to be used as part of a trial shipment to France. Too frequently the officials were led to make this statement to the owners of the dairies visited: "We like the breeding and conformation of your animals, but they are lacking in size." In the March number of the Journal of Dairy Science, W. B. Nevin, of the University of Nebraska, quotes from recent experiments which show that large cows of any breed do not require as much feed for maintenance per pound of live weight as do smaller cows. It was found that the amount of heat given off by an animal is in proportion to the body surface and not in proportion to its weight. Therefore, this would mean that since small cows have a greater surface in proportion to their weight than large cows, there will be a greater radiation of heat per pound of live weight and consequently a greater amount of energy feed would be required. But, aside from this slight advantage, the market today is recognizing the increased value of good-sized cows, and especially is this true of the larger breeds.

Calf Feeding Schedule

For Jersey and Guernsey (birth weight, 50 to 70 pounds), pounds of feed per day.

Calf Age	Whole Milk	Skim Milk or Calf Meal-Gruel (pounds)	Grain (pounds)	Clover Hay
1 to 3 days..	With dam			
3 to 14 days..	8 to 10 pounds (in 3 feeds)			
2 to 3 weeks.	6 to 8 pounds	1 to 3	⅛	All they will eat
3 to 4 weeks.	3 to 5 pounds	3 to 5	¼	All they will eat
4 to 5 weeks.	1 to 3 pounds	6 to 8	½	All they will eat
5 to 6 weeks.		8 to 10	¾	All they will eat
6 to 8 weeks.		9 to 11	1	All they will eat
8 to 12 weeks.		10 to 12	2	All they will eat and ¼ to 2 lbs. silage
12 to 24 weeks.		10 to 12	2 to 3	All they will eat and ¼ to 2 lbs. silage

Feeding Practice and Schedule

A few fundamentals make for success in the feeding of young calves:

1. Milk should be fed sweet and warm.
2. Use pails kept clean by scalding and airing.
3. Feeding must be regular in time and amounts.
4. If gruel is used, mix only what would be consumed at each feeding period.
5. Increases in ration should be guided by milk scales.
6. Keep calf hungry rather than overfed.

The tables show calf-feeding schedules used and recommended by the Dairy Husbandry Department of the Pennsylvania State College. In an enlarged form it is an excellent guide to have tacked up in the dairy barn.

The feeding of skim milk or a so-called "substitute" should continue until the calf is seven or eight months of age, but many calves are fairly well reared altho altogether weaned when four months old. It has been proved, however, that the allowance of skim milk or gruel for the longer period will promote real economy in the poduction of first-class stock.

Calf Feeding Schedule

For Ayrshire, Holstein and Short Horn (birth weight, 70 to 100 pounds), pounds of feed per day.

Calf Age	Whole Milk	Skim Milk or Calf Meal-Gruel (pounds)	Grain (pounds)	Clover Hay
1 to 3 days..	With dam			
3 to 14 days..	10 to 12 pounds			
2 to 3 weeks.	7 to 9 pounds	1 to 3	⅓	All they will eat
3 to 4 weeks.	4 to 6 pounds	4 to 6	¼	All they will eat
4 to 5 weeks.	1 to 3 pounds	7 to 9	½	All they will eat
5 to 6 weeks.		10 to 12	¾	All they will eat
6 to 8 weeks.		11 to 13	1	All they will eat
8 to 12 weeks.		12 to 14	2	All they will eat and ¼ to 2 lbs. silage
12 to 24 weeks.		12 to 14	2 to 3	All they will eat and ¼ to 2 lbs. silage

Milk Substitutes

It will be noted that the above schedule also deals with calf gruel or a substitute. A milk substitute is something fed in place of milk when the latter is unavailable. Substitute mixtures are necessary to the dairy business in general, and especially in those sections where whole milk is sold, because it is considered too expensive to raise calves on whole milk up to seven months of age, unless they can be sold for a high price as breeding stock. In "Dairy Cattle Feeding and Management," by Larson and Putney, is found the following statement dealing with milk substitutes: "Many prepared mixtures for milk substitutes are upon the market. Several of these were given a thoro trial by Savage and satisfactory gains were made. In one of these mixtures is found oatmeal, oat germ, vacuum cooked wheat meal, flax and condensed milk. Another consists principally of linseed meal, bran, carrot bean, cottonseed meal and fenugreek."

In 1916 the Indiana Experiment Station found that a home-mixed substitute gave better and cheaper results than a certain popular commercial calf meal. This home-mixed substitute is quickly and easily prepared and is fed in the amounts as skim milk. It is composed of 100 pounds hominy feed, 100 pounds oil meal, 100 pounds red dog flour and 100 pounds dried blood. The gruel is prepared by stirring 1 pound into a gallon of water at a temperature of 145 degrees F and allowed to cool to 95 degrees F.

After fair trial, hundreds of dairymen in Tioga County are gratified with results following the use of this home-mixed calf meal. While they realize that it is not equivalent in feeding value to skim milk, yet the gains are quite satisfactory and the calves are maintained in a very thrifty condition. The increased and continued use of an article is its best recommendation. Several feed dealers are now mixing this meal at the request of the farmers and in the neighborhood of one feed mill fully three hundred patrons now purchase it regularly.

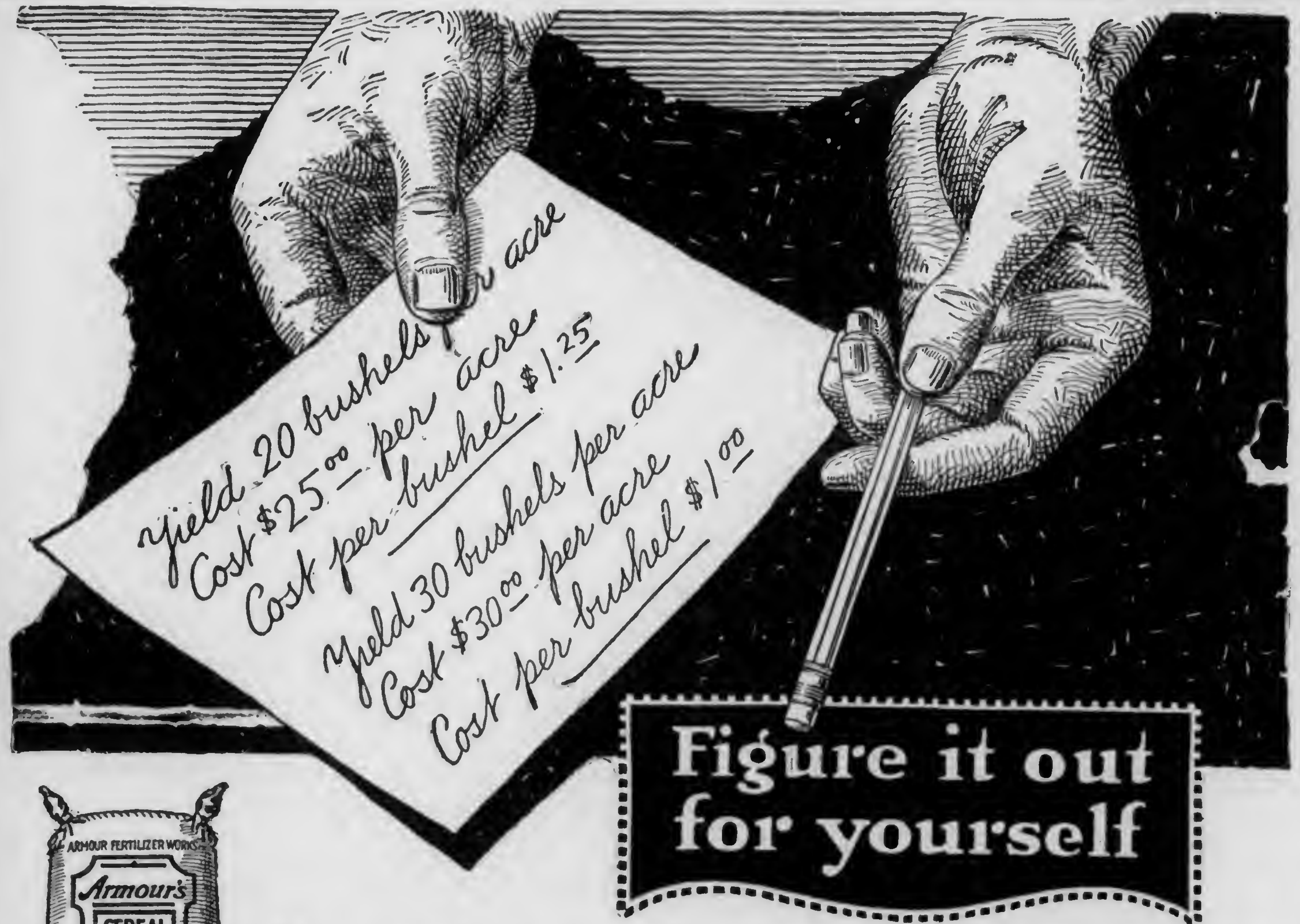
Two excellent grain mixtures to be fed in accordance with the schedule are given below. They are recommended by the Pennsylvania State College and have proved highly satisfactory to Tioga County dairymen. They are:

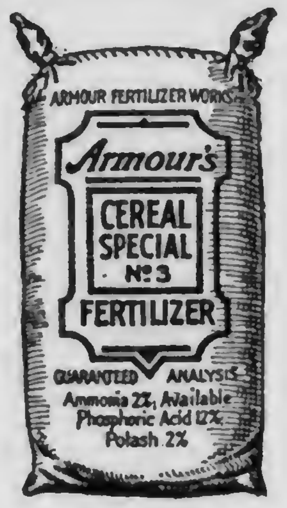
No. 1.—100 lbs. corn meal, 100 lbs. wheat bran, 100 lbs. ground oats, 50 lbs. oil meal and 8 lbs. dried blood.

No. 2.—300 lbs. oats, 100 lbs. wheat bran, and 100 lbs. oil meal.

NEW AYRSHIRE QUEEN

Bloomer's Queen, 39119 with a record of 21,820 pounds milk, 856.41 pounds fat is the new queen of the Ayrshire "Milky way" having broken the Senior Four Year Old record held by August Lassie, 29581 whose production of 17,784 pounds milk, 720.03 pounds fat made her previous world champion in her class. This record exceeds that of the former Ayrshire champion by 4,036 pounds milk and 136.38 pounds fat. Bloomer's Queen is an American bred champion having been bred by James





More Wheat Per Acre—Lower Cost Per Bushel

YOUR profit from fertilizing wheat land this fall will depend on the cost of the plant food and the size of the crop. More plant food for the same money means more wheat and larger profits.

You can cut the cost of plant food by buying Armour's high grade fertilizer. It costs the same to manufacture, batch, pile, store and cure—and for bags, bagging, freight and hauling—a ton of low grade fertilizer as a ton of Armour's high grade fertilizer. It takes two tons of low grade fertilizer to equal one ton of high grade fertilizer.

If you buy low grade fertilizer you pay double for this cost; if you buy Armour's high grade fertilizer, you save this unnecessary expense Get every pound of plant food that you are entitled to by buying Armour's high grade mixtures.

You can increase both yield and profit by using Armour's Cereal Special Fertilizers; you can depend on them for the most wheat per acre at the lowest cost per bushel.

Armour's Cereal Special Fertilizers fill every wheat need—furnish quickly available ammonia to give the young wheat plant a good start and a strong, healthy root growth. It will go into the Winter right—sturdy, vigorous plants that are ready to grow as soon as the ground warms up. Two per cent of ammonia is enough. It is not practical to use less than two per cent and not necessary to use more.

—plenty of available phosphoric acid to stiffen the straw, fill out the grain and ripen it early.

—sufficient potash to help the phosphoric acid, plump the grain and increase the weight per bushel. *You pay the thresher by the bushel but you sell by weight.*

Armour's Cereal Special Fertilizers

The Right Fertilizer for Your Soil

On sandy soils—use Armour's Cereal Special Fertilizer No. 1—2-10-6.
On loam soils—use Armour's Cereal Special Fertilizer No. 2—2-10-4.
On clay soils—Use Armour's Cereal Special Fertilizer No. 3—2-12-2.
If you have a heavy clay soil which you know can supply the necessary potash use Armour's Cereal Special Fertilizer No. 4—2-12-0.

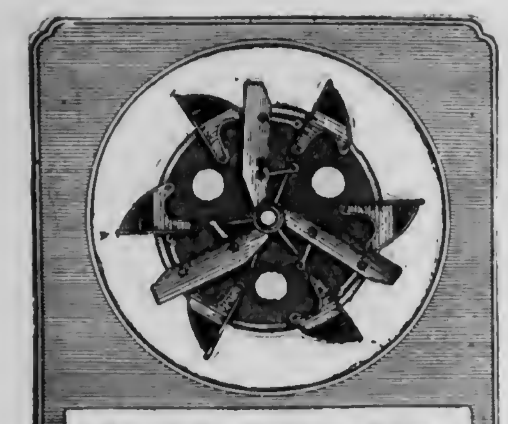
supply the right balance of plant food to grow the most wheat at the least cost per bushel. The formula is right—the materials are the best that can be had and they feed the wheat just what it needs and what the soil lacks.

Armour's Cereal Special Fertilizers are concentrated to the highest practical point so that the plant food cost will be as low as possible; they are made with the best materials adapted to the special needs of the wheat crop; they are manufactured by the latest and most efficient methods, in modern factories, under the supervision of trained men.

The Armour reputation for efficiency is world-wide. "Saving everything but the squeal" is an Armour proverb. No business is conducted on a more narrow margin of profit, with a greater degree of efficiency or with a higher ideal of service than that of the Armour organization.

See our local sales agent NOW; have him reserve your Fall requirements. Ask him for a copy of our booklet "Turning Fertilizer Dollars into Wheat Dollars" or write direct to our nearest office. Don't delay—wheat seeding time will soon be here.

4283 Baltimore **ARMOUR FERTILIZER WORKS** Chicago



The "Why" of the Wheel

An ensilage cutter with *four or less fans* requires an elevating pipe large enough to receive *at least one-fourth* of the ensilage cut at each revolution of the cutting wheel.

But a Papec—with its *six fans*—requires a pipe large enough to receive *only one-sixth* of the ensilage cut at each revolution of the wheel.

Thus the Papec with its *six fans* and *small pipe* "throws and blows" a steady stream of silage with a force more concentrated, and, therefore, with a pressure much greater, than a cutter with four or less fans and a larger pipe.

So, there you have it—*the "why" of the wheel*—why

Papec Ensilage Cutters Require *Less* Power And Elevate *Higher*

They *throw* the ensilage 15 to 20 feet before the pressure of the powerful air blast is used. Then with the air pressure concentrated in the small pipe, the steady stream of ensilage is elevated to the top of the *highest* silo.

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She has completed three immature records which total 47,705 pounds milk, 1,820.29 pounds fat, freshening for each of the immature year classes:

Test Begun	Class	Milk	Fat
12-19-1915	J-2	12426	463.33
3-25-1917	S-3	13459	500.55
7- 7-1918	S-4	21820	856.41
Average		15902	606.76

Bloomer's Queen is a big rugged cow with lots of constitution and splendid conformation. She finished this record in grand form.

PARAFFIN COATING FOR SILO WALLS

Make Porous Concrete, Tile and Brick Walls Air Tight

With the silo-filling season approaching, a careful examination of silos, followed by necessary repairs will help improve the keeping quality of the contents. According to studies of the U. S. Department of Agriculture, air-tight walls are the chief requirement; a leak no larger than a small nail hole may spoil several hundred pounds of silage. In the case of wood-stave silos the hoops and braces should receive attention to insure close fitting.

Silos made of concrete, brick, or other material of porous or semi-porous nature, are benefited by an inside coating of a preparation which seals the pores and also prevents the action of silage juices on the walls. The coating most commonly used hitherto is coal tar thinned with gasoline and applied with a paint brush. A number of materials of like nature have been considered for this work, but the one showing the most promise is paraffin

How to Apply Paraffin

Paraffin may be applied either cold or hot to silo walls. With the cold method, the paraffin is dissolved in a volatile carrier like naptha until a saturated solution is obtained. Four pounds of paraffin dissolved in one-half gallon of gasoline or naptha will make one gallon of this solution. The solution is then applied much like paint to the surface of the concrete, which it penetrates according to dryness and porosity. One gallon has a covering capacity of about 200 square feet.

The naptha soon evaporates, leaving the paraffin in the holes. When applying the paraffin by this method, special care must be taken that there is good ventilation in the silo and that there are no lights or fires nearby. Naptha is very inflammable, and a serious explosion or fire may result from careless use.

Walls Must Be Warm

Paraffin alone may be applied in melted form. It requires six and one-half pounds of paraffin to make one gallon of the hot paraffin solution. The work should be done on a warm day and the concrete must also be sufficiently warmed by artificial heat so that the paraffin may be thoroly rubbed in. One gallon will cover about 250 square feet of surface. When this method is followed, a blow-torch should be used to warm the walls as the paraffin is being applied, and also to thin and spread the layer of paraffin. Two buckets of paraffin should be used, one to be heating while the other is being applied. The hot-paraffin treatment is one of the most successful for waterproofing surfaces exposed to weather.

The amount of paraffin required to coat a silo may be determined in the following manner:

Multiply the height of the silo by its circumference (the circumference is the diameter multiplied by 3.1416), which gives the number of square feet of surface on the inside of the silo. If the cold method is to be used, divide the result just obtained by 200, which gives the number of gallons of the paraffin-naptha solution required. Multiply this result by the amount of paraffin and naptha in each gallon to obtain the total materials required.

The Product of Well-Grown, Well-Fed Calves

Use of Hot Method

Where the hot method is used, divide the number of square feet of silo wall to be coated, by 250 to find the required number of gallons. Multiply this result by 6½ to obtain the number of pounds of paraffin required. For example, to find the paraffin required to coat a silo 14 feet in diameter and 30 feet high:

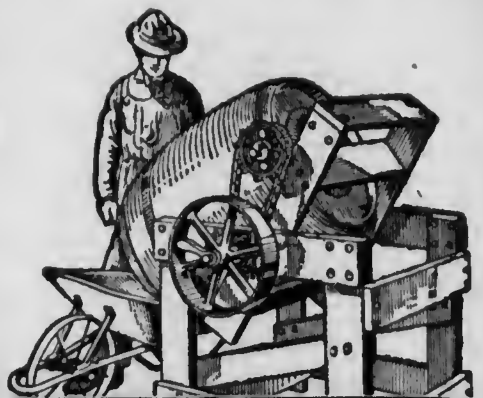
Diameter (14 ft.) multiplied by 3.1416 equals 43.98 ft., the circumference of the silo.

Height (30 ft.) multiplied by circumference (43.98 ft.) equals 1319.4 sq. ft., the wall area.

Area (1319.4 sq. ft.) divided by 250 sq. ft. equals 5.27, or number of gallons required.

Gallons required (5.27) multiplied by 6½ equals 34.25, the number of pounds of paraffin required.

In both cases the cost may be estimated from the local price of paraffin and naptha. It should be remembered, however, that these figures will vary with local conditions.



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has become so popular in its first four years that thousands have been called for to replace, on their old towers, other makes of mills, and to replace, at small cost, the gearing of the earlier Aermotors, making them self-oiling. Its enclosed motor keeps in the oil and keeps out dust and rain. The Splash Oiling System constantly floods every bearing with oil, preventing wear and enabling the mill to pump in the lightest breeze. The oil supply is renewed once a year. Double Gears are used, each carrying half the load.
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Guernseys— Two males and several females at practical business prices.
MORNINGSIDE FARM, SYLVANIA, PA.

Dairy Prices and Prospects

The news of the August milk prices did not reach us until the last days of July. Even then we got no mention of the butter and cheese prices that were used as the basis. Not that these things are vital, but it is pleasant to know about things so closely allied with our business interests.

The Railroad Problem

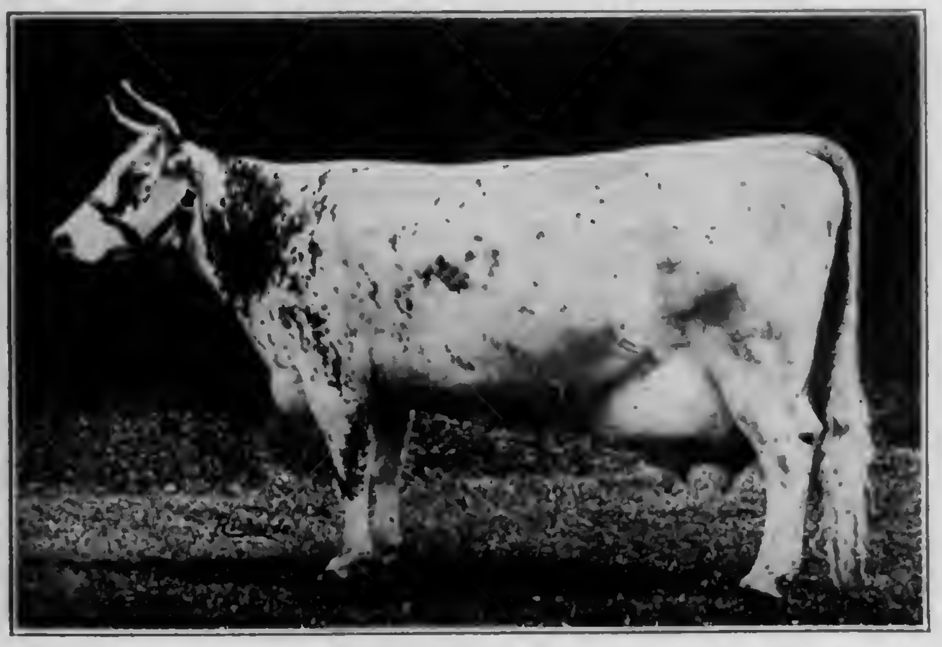
Somebody should give us other information, not for the purpose of influencing our discussions but to help us become better informed. The farmer is the broadest of men so far as he has information, but he has to work pretty hard and he sometimes lacks information that would be useful to him. I read a splendid article recently in a splendidly edited paper in which farmers were almost blamed for not coming out frankly and asserting what they want in relation to the railroads. For one, I am not well enough informed to say just what should be done with them. Practically every farmer wishes them turned back to their owners, but what about the conditions? No one wants them to go where the public will be treated unfairly, nor do we want the managers and the stockholders dealt with unfairly. Yet the railroad question is one that vitally interests us all.

If Senator Cummins has a clear plan, as we understand he has, and if some others have other plans, it is the plain duty of a writer of the ability of the one mentioned to give us in as few words as possible what these plans are and how they are likely to work. When we have enough definite information we have definite opinions and can state them. We want the railroads controlled and worked to their best ability to serve the public. Tell us the best plans that are proposed and how they are supposed to work out. It will be better than to give us a lecture on the desirability of expressing our views when we haven't the knowledge on which to base our views. This is only an illustration. The writer referred to is not under criticism. He didn't see that he could help us in this way. He is capable and I believe that he has an opportunity here.

Dairy Profits

I have said before that our dairy farmers are making some money as a rule. They are not for the most part making as much as the town dealer. It is their opportunity to pay off debts and to save something, however. One of the dealers called here to-day and in conversation said that all business men are making money. He never saw such times for getting ahead. How long will it last, was his inquiry. He says milk will not bring as much next winter as last in terms of feeds. That will tend to bring down the price of cattle. But, he continued, prices cannot go down greatly so long as wages keep up and they are advancing. There will be a drop sometime was his caution. Wages are not, as a usual thing, we believe, any higher than they ought to be. There may be a few cases where men get too much. At an average it is not so. On the farm it is scarcity of labor and usually the quality that causes complaint.

I had a talk with the banker yesterday morning. He has just returned from a bankers' conference. These conferences are beneficial to bankers and business men and our League conferences for a county are beneficial to dairy farmers. The trouble is that our conferences do not go quite far enough. But about the banker's story. He found that the sentiment is that prices generally will hold for two years at least and perhaps advance somewhat. That had no reference to farming in particular, and it is true that others are quite likely to get a better chance than we will. For all that, we will get something while the others are getting more. If the farmer is reasonably independent of hired help he will make good money now. If dependent, I pity him. I am in that class. I pity myself.



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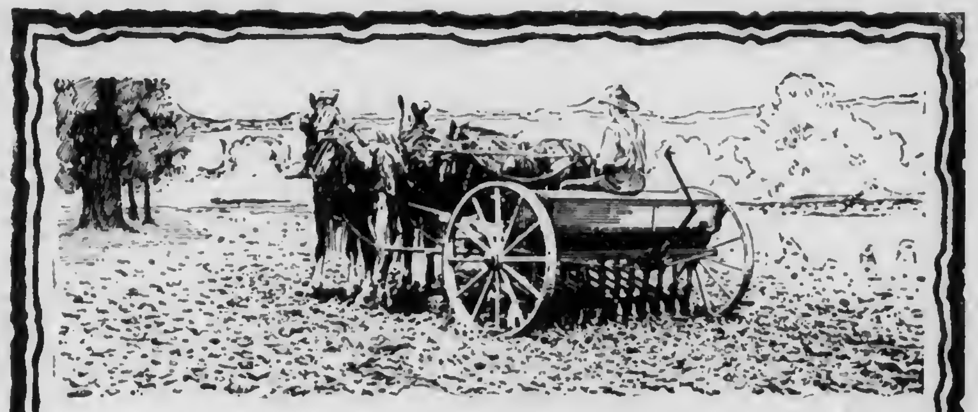
Looking Ahead

Not long ago I talked with an old school friend who is in business in New York city. He isn't just happy after all, altho he has done well financially. He says that all business so far as he has had opportunity to determine is, considering the next five years fairly safe, but after that no man on earth can foresee. It is well for us on the farms to look ahead and be wary, but not too doubtful. Business has it in for us on cheaper living any way and we cannot tell what they will be able to hand out to us in the course of five years.

Oh yes, the August milk price is a bit lower than we expected, altho we expected a smaller advance than usual. It is an advance of 12 cents over July, or an actual lowering so far as butter and cheese are concerned. We got 36 cents bonus in August and 16 cents for July.—H. H. Lyon.



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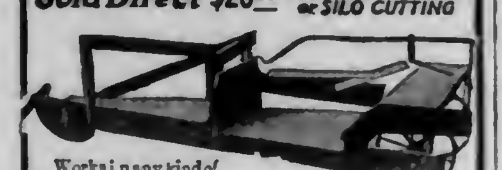

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POULTRY

THE PROFITS IN POULTRY

The article by A. J. Bradley in the Juy 18th issue of Pennsylvania Farmer expresses many thoughts that have been in the minds of poultrymen for a long time. The request of the editor for other experiences leads me to give mine. At the present time we make less net profit from our poultry than from any other feature of our farming business. We do more work for less money with the hens than with the other sock and crops. At the same time we like the flocks of hens and intend to keep them because we like the business and do make some mony out of it.

White Wyandotte Hen

In one short article we cannot present the figures on our business, because figures may be misleading, and it is not fair to give any of them without presenting them all. Some hatches from the incubator do very well and have a low percent of mortality. Others do not do as well. Some seasons are more profitable than others. Of course, hatching eggs and pure-bred stock bring better prices than market stock. All of these factors enter into the business and presenting the entire collection of figures concerning a poultry business is quite complicated and I doubt if it would be interesting reading. To sum it up, we would say that if the business did not pay a profit we would immediately cut down our flock to about twenty hens for home use and not try to serve any eggs to the public. As Mr. Bradley states in his article, there are many consumers with no appreciation of the cost of producing eggs and there is little satisfaction in selling goods to such buyers. Trading with private customers is all right if the right kind of customers are located. The other kind of customers have no chance to buy eggs at our farm.

The feed bills cut down the profits on the commercial poultry farm and sometimes turn them into losses. We make every effort to cut down the feed cost. This summer we have had quite a lot of sour milk and have purchased no beef scrap. The birds have had a large range and gathered lots of bugs and grasshoppers. Possibly we would have received more eggs by using beef scrap this year, but the sour milk has been a by-product that did not cost us much in actual money. We know that beef scrap is necessary if the hens lack animal food in their ration, but the sour milk helps to fill that need. It is the margin of profit that concerns us and not the number of eggs produced. I know that a large number of eggs are necessary to make profits, but simply mean that a difference in production of ten or twenty eggs per hen per year might not balance a greatly increased feed bill.

We have used a large quantity of oats in our rations and find them excellent for egg production. Oats that have been soaked or boiled and placed in galvanized pails on the range are fine food to stimulate egg production. All our green feed is gathered by the birds on a clover range during the summer. The winter green feed is all raised at home. We have discarded the use of sprouted oats because of the cost of the oats and the sprouting and use mangels and cabbages and cull vegetables to balance the winter ration.

A large part of the range has been covered with small fruit, mostly red raspberries. The birds do not injure the fruit, and the dense foliage furnishes a shade which helps to keep them in good physical condition during very hot weather. Some of the points mentioned in the above paragraphs may explain why we can keep the hens paying under present conditions. Other points of importance are the methods of selling the goods and the quality of the goods sold. Some will say, "Why, of course if you keep pure-bred stock and sell hatching eggs you ought to make it pay." But why is it not all right to keep pure-bred stock. The dairyman is never forced to apologize for his herd or his profits because he has pure-bred cows with good production records. The poultryman does not need to keep medium cull stock just because some believe that the poultry business is no good unless there is a profit when the eggs are all sold at the lowest possible price and the market poultry only bring what the huckster will pay.

We believe that there is no money in keeping the poorest kind of stock, whether it is dairy cattle, poultry or any other kind of stock. I do not see how a poultryman can make the business worth his trouble if he only sells eggs and poultry meat with no effort to make the additional profit that comes from hatching eggs and pure-bred breeding stock. If a man likes poultry well enough to succeed with it at all, he will like to keep good stock, and it will follow that he will make more profit. There is no reason why all the young cockerels should bring broiler prices and no more if a part of them are quality breeders of a breed which is well known because of its great utility value.

The chances of making money with poultry are diminished by the large number of farm flocks whose owners keep no records and do not know the cost of production or the amount of their losses. The birds in such flocks are often fed from the grain bins and the corn crib and the feed cost is not known. The grain is passed out in small quantities and one day's feed does not seem to amount to much. If the feed used in a year were added up and the sum total amounted to several hundred bushels of grain, there are some farmers who would cut down their poultry flocks in spite of the present price paid for eggs. On most farms there are enough hens to supply the family with eggs and furnish a surplus at some seasons. Usually this surplus is carelessly marketed without much worry as to whether it brings a profit or not and such eggs come in competition with the stock produced by the commercial poultryman who must make a profit or leave the business. Observation in many sections will prove that a large number of the poultrymen who have closed their plants closed them because they were good poultrymen and kept accurate records and not because they were failures and knew nothing about the business.

In our section a commercial poultryman sold off his birds and his equipment and went into the real estate business. He seems to have a happier smile as he passes in his automobile and he has banished a lot of worry with the poultry. I believe that he was not a failure with poultry but a good poultryman, located on a small farm, and knew enough to understand the conditions he was up against. He had to buy most of his feed. I would not wish to try to support a family with the profits he would have left after deducting the cost of operating his poultry plant.

I believe that the poultry business as a specialized commercial operation has been given a severe blow. The breeder of fancy poultry can make money and the breeder of good quality poultry on a farm can make money if it is properly managed and conducted along with other farming operations so that the overhead expense will be reduced. Even the breeders of the finest fancy poultry cannot always succeed because of the extra work connected with the business and the high cost of doing business of any kind. We believe, as Mr. Bradley said, that most poultrymen and poultrywomen are throwing a lot of their own labor in free with the eggs and poultry meat they sell.

However, there is another side to the situation which should be considered. Supposing that you purchased your equipment of incubators, brooders and houses before material became as high as now. Such equipment will bring only a small part of its original cost if placed on the market. Supposing that you like to work with poultry and it adds to your pleasure in the life on the farm. You obtain much satisfaction in breeding birds and studying them. Let us suppose that you have a good class of customers who appreciate your fresh eggs and do not kick at the price. Suppose that the poultry business works in very well with fruit growing and general farming and yet you like the work with the birds better than the other work on the farm. Under those circumstances what is the use of leaving the business even if Cuthbert red raspberries, Rosen rye, registered pups, etc., did make more money for the work expended than the hens earned. That is our situation and as long as the birds make profit we are going to stick to the business. However, it is good sense to print more about the seamy side of the poultry business as it will cause city buyers to appreciate poultry and eggs. At the present time I wouldn't be so mean as to encourage any friend of mine to take up poultry raising for a living unless it was done along with general farming. I like the business myself, but bought most of my experience when it did not cost as much as during the last two or three years. I liked Mr. Bradley's article very much.—K.

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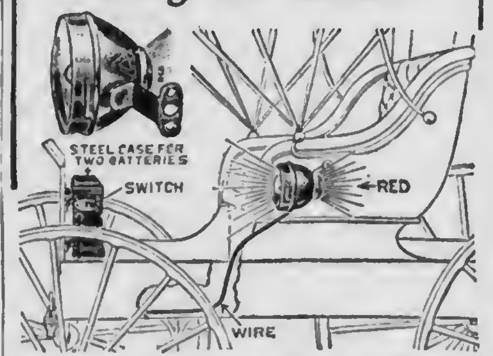
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PENNSYLVANIA EGG GRADES

In order that there may be no confusion or misunderstanding with reference to the enforcement of the new law prohibiting the sale of eggs for and as "fresh eggs" that are not "fresh eggs," as may appear upon proper test, James Foust, director of the Bureau of Foods, Department of Agriculture, of Pennsylvania, issues the following statement:

There are four classes of eggs—

1st. A "fresh egg" is one that is understood to have the following qualities: Its white is capable of whipping well; in cooking it can be satisfactorily poached or soft boiled; it has not absorbed foreign disagreeable odors; its embryo shall not have developed appreciably. The yolk should be fairly stiff and well rounded and the white should not be watery, and the chalanza shall be well defined.

Good Type of Gander

2d. Cold storage eggs must be sold in accordance with the cold storage law and must be represented and labeled "cold storage eggs."

3d. Eggs kept for a period of time by the water-glass, lime or other methods that cannot be classed as "fresh eggs" but are edible, wholesome and suitable for all food purposes except such as require "fresh eggs."

4th Eggs that are decayed, partly decayed, or decomposed and unfit for food purposes, have a commercial value for tanning leather such as is used in the manufacture of gloves. Rotten eggs must be promptly denatured with kerosene oil, and when opened must be placed in a container painted a bright red color. It is unlawful to open rotten eggs and remove the content from the shell in establishments where food products are prepared or manufactured, or to open rotten eggs in an establishment where good eggs are opened for food purposes.

NO SUCH MISTAKES FOR HIM

The stingiest man was scoring the hired man for his extravagance in wanting to carry a lantern in going to call on his best girl.

"The idea!" he scoffed. "When I was courtin' I never carried no lantern; I went in the dark."

The hired man proceeded to fill the lantern.

"Yes," he said sadly, "and look what you got."—Heald Herald.

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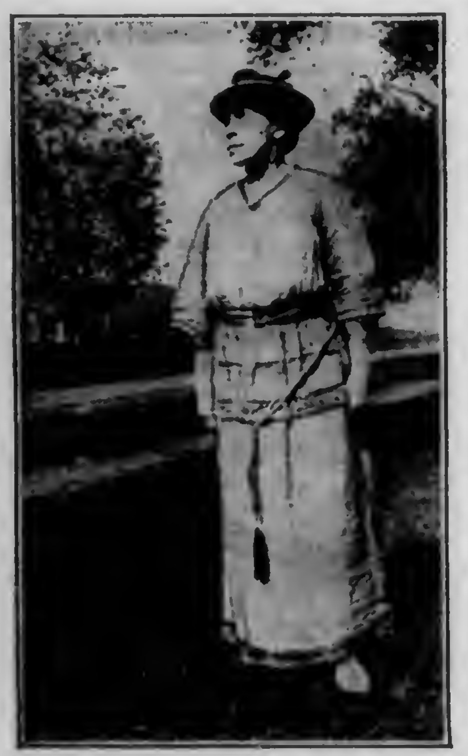
Canadian Government Agent.

How I Got Two New Dresses

I have this summer one of the prettiest and most serviceable cotton dresses that I ever possessed. I ordered the material, cotton voile, by sample by mail. The shades in it are old rose, gray and black, blended by outlining the tiny, irregular smudges of old rose and gray with the contrasting black. When the material arrived I tried it over old rose, then gray, then black, finally deciding that white made the best background for it.



Gown of Old Rose and Gray Cotton Voile

I also discovered that altho there was no white in the goods anywhere else, there was quite a bit of white in the selvage, which mixed and shaded into the old rose, gray and black of the body of the goods. I had some fine black lawn lining left over from making a dress last fall, which I decided could be used to advantage in connection with the black outlining in the design.

I made the material up crosswise of the goods because thus I could use the selvage for a really beautiful border. The ruffles, for instance, have this selvage border on the lower edge. For some places, as at the top of the bands finishing the kimono sleeves, around the neck, etc., this selvage border was cut in strips and piped with the black lawn mentioned above. This added greatly to the effect.

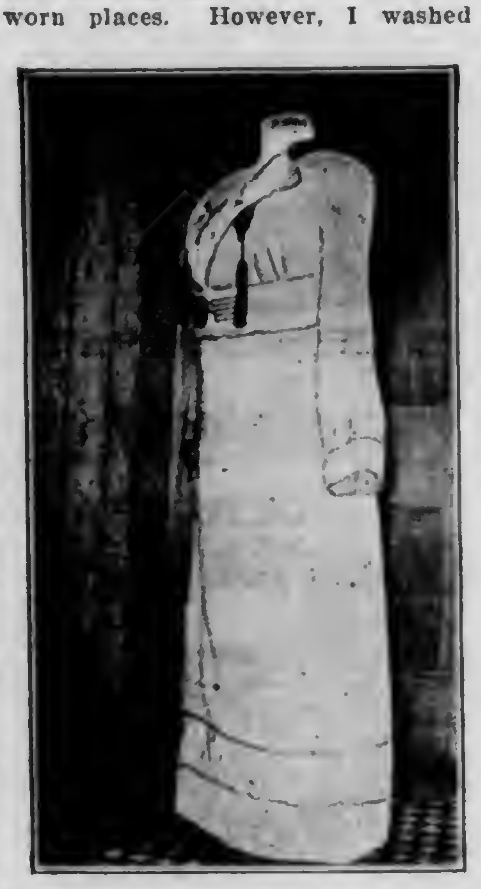
Being an enthusiastic clothing conservationist, I just had to add the "something old." And by the way, this frequently "brings success" to any woman, bride or otherwise. I remembered that I had, carefully put away, a black silk tassel, which had once tipped the drapery at the back of my grandmother's lace cape. It was somewhat worn around the wooden portion holding the tassel proper, so I crocheted sections with black sansilk to cover these worn places. The fringe was combed carefully until not a tangle remained, the new crocheted sections were sewed in place, and this black tassel was used to finish the narrow sash, as you see it at the front of the gown.

When buying thin cotton material for dresses hereafter I shall look for possible borders in the selvages. Remember that when making up a garment crosswise of the goods it must all be made up so—ruffles, body portion, everything. I have several times been able to get a dress out crosswise of the material when there would not have been enough of it to use straightwise.

The other frock shown herewith never could have been made into a dress this summer had Dame Fashion said, "full skirts." It was evolved from what remained of a dress of some years ago, when I had purchased too much goods. It was sand-colored wool batiste. After getting out the high-waisted skirt, with a box pleat folded in and stitched a few inches down the back, there was only just room enough to let the rest of the goods hang smoothly across the front and sides. There was one small piece left, out of which I cut the waist, but not enough for sleeves, only just enough material left for some small covered buttons to top the box pleat in the back.

So I bought a yard of silk having a beautiful harmony of pink and sand-color in its coloring. This I cut into bias lengths and used it for trimming bands, as you see in the photo. The old rose, unwearable now, had full shirred sleeves of sand-colored chiffon cloth. These had been made up crosswise of the material and left unhemmed at the bottom, the selvage making a very dainty finish. These old sleeves had been shirred just above the wrists, and the shirring had made pulled and worn places. However, I washed and pressed the sleeves, then laid over the worn places bias bands of the pink and sandcolored silk, and behold, I had some pretty sleeves for my sand-colored gown.

Notice the black braiding trimming the wide empire belt. It is worth a bit of explanation. I wanted some braiding on that dress, but I was ten miles from a store where I could get any braid, and I needed the dress for Children's Day, when even the grown-ups like to garb themselves in gala attire. There was not time to get braid from the store and sew it on. So, having in the house a yard of black silk, which I had got for shirring up the top of a black velvet bag, I unraveled that cord and got three yards of crinkly, satiny black cord, just fine enough for my purpose. I sewed it onto the belt, with the crinkles made by the twist of the fibers left in, and the effect is prettier than a straight flat cord could possibly be.



The Sand-Color Wool Batiste Gown

I am wearing this summer a sheer black hat, so I find it effective to have a touch of black somewhere about my summer gowns. Therefore for the something black for this wool batiste dress I used a crosswise length of black crepe which I had fortunately sent to have picoted on the edge. I made a little stole of this, and finished it with black tassels at the ends, as illustrated. Then I laid it around the neck, with the tassels hanging over the bust. The princess slip worn under this dress is of sand-colored half-silk lining. At the top front of the low neck the old shirred bit was placed, making a filled-in V.

Thus I obtained two midsummer gowns at very little outlay. And I can wear either of them with my black low shoes and my black hat. My gloves and hose match the sand-colored batiste. — The Make-Over Lady, Broome Co., N. Y.

MELONS IN VARIOUS WAYS

For Present and Future Eating

Cantaloupe Supreme.—Scrape out the seeds, take out the soft part of the pulp and cut it into ⅜-inch cubes; put them into small glasses, sprinkle with sugar and pour over them a little syrup from preserved cherries or red currants.

Nutmeg Melon Salad.—Cut small uniform-sized nutmeg melons in two, remove seeds, and scoop some of the soft part and cut it into small bits, then add ripe tomato also cut into pieces, and mix in some mayonnaise dressing. Put this mixture into the melon cups and set in a cool place until ready to serve.

Cantaloupe Delicious. — Scoop out the soft pulp, and for each cupful add 1 cup of shredded pineapple and ½ cup of currant or raspberry jam, 1 tablespoonful lemon juice, a grating of nutmeg and sugar to suit the taste. Mix and let stand in a cool place for two hours. Then fill the washed melon rind cups with the mixture, and serve on lettuce leaves. It makes a delicious dessert.

Melon Yum-Yum.—This is a good way to use a tasteless muskmelon. Cut the pulp into small pieces, sprinkle generously with sugar, add the juice of 1 lemon and of 1 orange, and let stand several hours in a cool place before serving.

Muskmelon Compote.—Soak 3 tablespoons tapioca in cold water over night; next morning cover with 1 pint boiling water and cook until the tapioca is clear; add then 1 cup sugar and the stiffly beaten white of 1 egg; remove at once from the fire and beat until mixed and light; then set away to cool When ready to serve, fill some sauce dishes with a mixture of sliced peaches or ripe, mellow apples, or lacking either of these fruits, with sliced bananas or pineapple, or canned fruits like strawberries or cherries or both. Then pour the tapioca over this, and serve with fruit juice or cream, as preferred.

Plum Meringue in Muskmelon.—Peel and remove the stones from 12 ripe plums, mash the pulp and add 1 heaping tablespoon sugar per this quantity of pulp. If possible, let stand in refrigerator until chilled, then drain and fold in stiffly whipped whites of 2 eggs, a pinch of salt, a little grated nutmeg and 1 small cup of cream whipped. Heap this meringue into glass sauce dishes and serve.

Melon Pickles

Red Watermelon Pickle.—Remove the seeds from firm but ripe watermelon pulp, and cut the pulp into convenient-sized pieces. Per 6-pound melon add 2 pounds white sugar and the grated rind and juice of 2 lemons. Put all in a kettle and let boil slowly until liquid is as thick as desired. You will be surprised what a delicious and pretty pickle this makes. The red pulp will be firm.

Sweet Pickled Watermelon Rind. —After peeling, cut into convenient-sized pieces and boil in salt water (4 tablespoons salt per quart of water) for fifteen minutes, then rinse in cold water until the flavor of the salt is gone. Make a syrup thus: Three pounds sugar, 1 pint vinegar, 1 pint water, 1 tablespoon ginger root, 1½ tablespoons whole cloves, 2 tablespoons stick cinnamon. Put the watermelon rind in this syrup, and boil till the rind is clear. Pack in jars, pour over the pieces enough of the syrup to fill the cans, and seal.

Green Watermelon Pickle. — Cut the white part of the melon rind into cubes or rectangular pieces, parboil in water with 6 peach leaves and ½ teaspoon soda to get a staying green color. Remove the melon, soak in alum water for an hour, drain and rinse well in clear water. Make a syrup with 1 pound sugar per each pound of melon, and the juice of 1 lemon, 6 fresh rose geranium leaves and a little water. Let boil up, remove the geranium leaves, put in the melon and cook until tender. Set aside for twenty-four hours, then drain off the syrup and boil it down to about half, add the melon and cook until it is transparent. Seal and keep in a cool place.

Muskmelon Sweet Pickles. — Cut melons that are a little underripe into strips, peel, lay in crock and let set over night. In the morning pour off the vinegar, and per each quart of it add 3 pounds sugar (preferably brown), and ½ ounce each of cinnamon, cloves and whole mace. When this vinegar gets to boiling add the melon and boil until clear and tender, then remove the melon, boil the syrup fifteen minutes longer, and pour it hot over the melon. Cover closely or better seal to make sure of not being bothered with mold.

Melon Preserves

Muskmelon Preserve.—Peel underripe melons, scrape out the seeds, and cut the melon into small pieces. Cover with sugar, using three-fourths the weight of the melon in sugar; do not add any water. Set on the back of the stove and bring slowly to boil, watching to see that the melon does not get scorched; simmer until the melon is clear and the syrup quite thick; then seal.

Ginger Watermelon Rind. — Peel and trim off all the red part from the green rind, cut the green part into inch squares, and soak over night in lime water made by dissolving 1 ounce lime in 2 quarts water. Next morning let stand two hours in clear water, then drain well and boil rapidly for 15 minutes in ginger tea made by steeping 1 ounce ginger per 1 quart water; then finish cooking in a syrup made by using 1 pint of this ginger tea strained and sweetened with 1½ pounds sugar. Cook rapidly until tender and clear, which will take about two hours. After the rind has boiled half an hour add half a lemon, cut in thin slices, per the above quantity of juice and rind.—Seal in cans.—Harriet Mason.

DOROTHYS AND SPIREAS

For the Busy Farm Woman

Why do we see houses in town so often all banked with flowering plants, porches trimmed with vines and lawns bordered with shrubs, while such beauties are far too scarce in the country? Is it not because we on the farms are usually much busier and have less time and money to spend thus? I can't believe that town people have a bit more refined tastes or appreciation of charming surroundings than we have. On the farm all hands are often kept so busy 365 days in the year getting the necessities of life that neither the farmer nor his family has much time to care for ornamental plants.

For those of us who are thus situated there are the Dorothy Perkins roses and the various spireas, which require little care, and are very easily grown. Two or three years ago I set out half a dozen Dorothys and one spirea Van Houtli, and I doubt if I have given them all an hour's care per year since then, for I have scarcely had it to give, and my spirea is now a good thrifty shrub three feet tall, with a spread of probably 30 inches, blooms well and grows like a weed this year. Of course, if I could have given it better care it would have done much better. I have proof of that, because my neighbor set one at the same time, and gave it much more attention than mine got, and it is a mass of bloom several feet across

One of my Dorothys died, but the other five are doing surprisingly well considering the little attention they have had. They were masses of bloom quite a long time this season, despite the fact that they were left to sprawl in the grass until a short time ago, and the tips of the branches were sometimes mowed off (which spoils almost any climbing rose by converting it into a branching shrub). The two largest ones have nearly a dozen shoots 10 or 12 feet long, and another one is nearly as large. We now have them trained up on a simple but roomy trellis, and they are rapidly covering it. By next year, when this year's growth will bloom, I expect them to be satisfactorily beautiful. Indeed, they were a decided joy to us this year.—E. M. Anderson, Chautauqua Co., N. Y.

BLUING

Make a dark bluing water and add enough to the final rinse water to give desired shade. Stir well. Use less bluing for fine soft materials and linens, and more for coarse thick materials. Some bluings contain a compound of iron. This will cause rust spots if it comes in contact with soap. Therefore rinse out all soap before bluing. If you have good drying facilities, your clothes will keep white without bluing.

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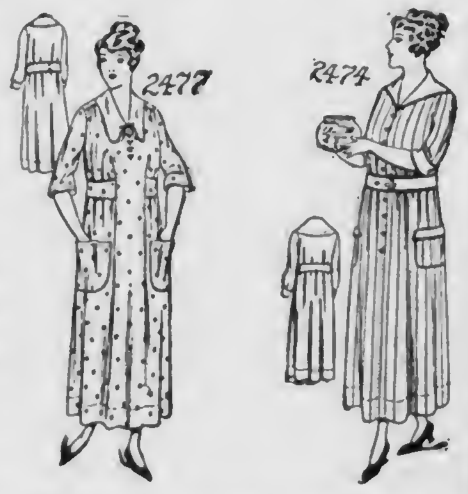
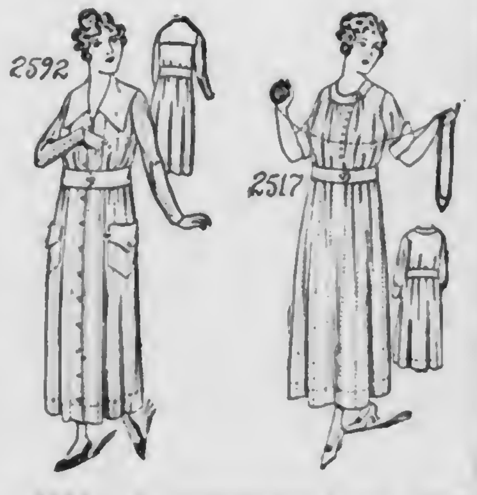
WORK DRESSES YOU'LL LIKE

2477.—For this one could use galatea, khaki, drill, linene, percale, gingham or chambray. The fullness of the fronts forms a panel plait at the center, under which the belt is fastened. The belt confines the fullness over sides and back. The sleeve may be finished in wrist length, or in loose style, at elbow length. The pattern is cut in 7 sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. Size 38 requires 4¾ yards of 36-inch material. The dress measures about 2⅛ yards at the foot. Price, 10 cents.



2474.—The front closing is a practical feature of this one-piece garment. The belt confines the fullness at the waistline. The pattern is cut in 7 sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. Size 38 requires 6¼ yards of 36-inch material. Price, 10 cents.



2592.—A comfortable house dress like this will make work lighter and more agreeable. The style is becoming. It is simple and easy to develop. The pattern is cut in 7 sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. Size 38 requires 5 yards of 44-inch material. The dress measures about 2⅜ yards at the foot. Price, 10 cents.

2517.—Here is a model easy to develop and easy to put on. Skirt and waist portions are in one piece. The sleeve may be made in wrist or elbow length. The pattern is cut in 7 sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. Size 38 requires 5¼ yards of 36-inch material. The dress measures about 2¼ yards at the foot. Price, 10 cents.

Study your sewing machine and keep it adjusted so that the work may seem as short and easy as possible.

In pressing silk take care that the iron is not too hot, for excessive heat yellows, stiffens, and cracks the fabric.

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Markets

PHILADELPHIA PRODUCE

Philadelphia, Pa., August 11, 1919.

Under supplies that are more plentiful, the potato market is weak and lower, with trading today very slow even at the lower prices. It looks as if prices might go a little lower before the market becomes settled. Both New Jersey Giants and Cobblers found a very slow movement, with the Giants being offered at $5.25 per sack of 150 pounds, but the buyers were only bidding $5 per sack, so very little business was done. Five dollars and seventy-five cents per sack was being asked for the Cobblers, but only a few were sold at this price, and values settled later to $5.50 per sack. The nearby potatoes in ⅝ baskets were being sold at from $1.10@1.25 per basket for the primes, with the No. 2's at 50@75c per basket. Southern barreled potatoes, which sold a week ago at $6@6.75 per barrel, only brought $5@5.50 per barrel today, with No. 2's at $1.75@3.25 per barrel, as to condition.

Sweet potatoes are gradually increasing in supply, there being 1,050 barrels here today. Sweets from the Eastern Shore of Virginia sold at $8.50@10 per barrel for No. 1's, and $4.50@5.50 per barrel for the No. 2's. A few New Jersey yams are also arriving and selling around $3@3.25 per ⅝ basket.

Vegetables

Both green and wax beans are generally showing poor quality, and while some of the best green are selling at 65@75c per basket, the majority are very poor and sell from 25@50c per basket for the green beans, while the wax are ranging from 50@90c per basket. Bunch beets are in rather moderate supply and selling from 2½@3½ per bunch. The loose beets, however, are in rather slow demand at from 75c@$1 per hamper. Cabbage is selling at about the same basis as last week for fancy stock, viz, 40@60c per ⅝ basket, but there is some poor cabbage coming which is selling at from 29@35c per basket. Bunch carrots remain steady and unchanged at 2@3c per bunch, but the loose carrots in hampers appear to be weaker and are selling slowly at 85c@$1.25 per hamper. The celery market is showing very little change over the dull, draggy feeling prevailing last week. Supplies are ample and the movement slow at 25@50c per bunch, with the celery hearts at 4@6c per bunch.

There have been ample supplies of corn on the market since our last week's report, and prices have been considerably lower, but a reaction has taken place and at this writing about the same prices are prevailing as a week ago, viz, 75c@$1.25 per ⅝ basket for the New ersey corn and $1.50@2.50 per 100 ears for the Pennsylvania corn. Cucumbers continue to sell at very low prices, altho there is some signs of improvement in fancy cucumbers. Sales today ranged from 25@60c per ⅝ basket, with pickles selling from 60@$1 per basket. The market is showing another advance on egg-plants, which are meeting a good demand at $1.50@1.75 per ⅝ bushel basket. Lettuce is selling at much higher prices than it was a week ago. Supplies are light, there being only four cars here today. New York lettuce sold at $1.75@2.50 per box of two dozen heads, while hampers sold at $1.25@1.50 per hamper. New Jersey lettuce is selling at $1.50@2 per box. Lima beans are in light supply and continue to bring high prices, ⅝ baskets selling at $2.75@3.25, and bushel hampers at $3.50@4.50. Okra are in light supply and fancy small ones are in good demand at $1.75@2 per basket, while the large okras move slowly at $1@1.25 per basket.

Onions are lower, nearby New Jersey stock selling at $1@1.50 per ⅝ basket, with hampers at $1.25@2.25. White onions range from $1@2.50 per hamper, as to quality, some being very poor and not properly cured. Parsley shows improvement, selling at $1.25@2 per 100 bunches. Peppers are not as high as they were a week ago, and selling at 40@65c per ⅝ basket. Squash is plentiful and selling slowly at 15@25c per ⅝ basket. Tomatoes continue to show a wide range, best selling at $1.25@1.50 per basket, while the poor grades are selling from 30c up to 75c, as to condition and quality. Turnips continue to meet slow sale at from 50@75c per basket for the yellows, with the whites selling at from 25@50c per basket. Watercress is in light supply, but little is wanted at from 2@2½c per bunch.

Fresh Fruits

The market continues to be amply supplied with apples from nearby New Jersey and Pennsylvania growers, and apples from other sections are not needed. There is a good active demand for fancy hand-picked apples, which are selling at from $1@1.75 per basket, with No. 2 at 50@90c and culls and windfalls at 20@40c per basket. The peach market is also amply supplied with stock from Maryland, Delaware and New Jersey points, which are selling well, when fancy, at good prices; Delaware crates sell at $1.50@2.50, bushels at $1.75@2.50, and ½ bushel baskets at 50@$1.25, as to quality. New Jersey peaches are selling at practically the same prices as the Delaware stock. Some western peaches today sold as high as $3.75 per bushel, but these were the fancy Elbertas.

Under the very heavy supplies, cantaloupes from Maryland and Delaware are selling at very low prices, ranging from 75c@$1.25 per crate for standards, $1@1.50 per crate for jumbos, 50@60c per crate for ponys, and 60c@$1 for flat crates. The New Jersey cantaloupes are increasing in supply and gradually declining in price. Today's offerings of New Jersey cantaloupes sold at $1@1.50 per basket for the No. 1's, and 35@75c per basket for the culls. Watermelons are now coming from Maryland and Virginia points, and these show much better quality than those from further south. Maryland and Virginia watermelons sold at $500@650 per car while the Carolina watermelons brought only $225@400 per car. Huckleberries are in light supply and steady at 20@23c per quart for fancy berries, but some showing poor condition only bring 15@18c. Blackberries show little or no change over last week's prices, selling mostly at 18@20c per quart, with fancy up to 22c per quart.

Poultry

There has been quite free supplies of live poultry on our market during the past week, but under a good demand prices have generally held about steady on all kinds, with the possible exception of spring ducks, which are lower. Live fowls have been fairly plentiful, but an active demand has kept the market well cleaned up at from 35@37c per pound. Spring chickens have also been arriving quite freely, but the demand was very active at the prevailing prices, so that there has been no surplus from day to day and prices have remained unchanged at 36@40c per pound for the fancy springers, with the Leghorn springers at 30@34c per pound. Old roosters show no change at 23@25c per pound. Under the increasing supplies spring ducks have declined in price, but are meeting an active demand at the revised quotations, which are 30@32c per pound. Old ducks remain about steady at 26@30c per pound.

Eggs

The offerings of eggs at this season of the year always show the defects incidental to hot weather, and this season is proving no exception. There is a very good active demand for strictly fancy nearby eggs that will grade up to standard at full former values, which are 50c per dozen for the current receipts and 52c per dozen for the firsts. But most of the supplies are under grades and very irregular in value. These eggs sell at very irregular prices according to quality and degree of loss shown; some eggs selling as low as 36c per dozen, while other marks of undergrades range on up at various prices to 45@48c per dozen. Western eggs sell at from 48@52c per dozen as to quality, while the southern eggs range in value from 36@46c, as to quality. Some strictly fancy well-known brands of nearby eggs will bring a premium over prices quoted.

LANCASTER PRODUCE MARKET

Lancaster, Pa., August 11, 1919.

Prices were firmly held here today at last week's figures, and produce was generally offered in abundant quantities. Corn, of which there was a veritable deluge, ranged from 15 to 35 cents per dozen. Fifty cents a dozen was the only quotation for eggs.

Butter and Eggs.—Creamery butter, 70c lb.; country butter, 65@70c lb.; eggs, 50c doz.; duck eggs, 50c doz.; goose egge, 10c each.

Poultry.—Dressed old chickens, $1.75@2 each; dressed young chickens, $1.25@1.75 each; old live chickens, 28c lb.

Vegetables.—Corn, 15@35c doz.; beets, 5c bunch; beans, 10@12c per ¼ pk.; tomatoes, 10c box; lima beans, 50c qt.; do., 10@15c lb.; califlower, 10@15c head; sweet potatoes, 50c per ½ pk.; potatoes, 25@35c per ½ pk.; turnips, 15c per ½ pk.; spinach, 20c per ½ pk.; lettuce, 15@20c head.

Fruits.—Apples, 15@35c per ½ pk.; blackberries, 20c box; huckleberries, 20c box; watermelons, 35@85c each; cantaloupes, 10@15c each; pears, 5@15c box; peaches, $1@1.50 basket; do., 10@20 box.

Grain Market.—Wheat, $2.20 bu.; rye, $1.65 bu.; oats, 85c bu.; corn, $1.95 bu.; timothy hay, $31 ton; mixed hay, $30 ton; wheat straw, $16 ton; oat straw, $15 ton.

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YORK PRODUCE MARKETS

York, Pa., August 11, 1919.

There were no noticeable changes in the market conditions since the last report, except in corn. Last week recorded a decline on Friday and Saturday. This continued into this week and was much stronger. It was the more apparent as the corn that came on the market this week was nearly all Stowell's Evergreen, noted for its quality and size of ear, yet the decline continued and at 2 cents per ear there were still many sacks unsold after the markets. Potatoes continue in light supply.

Eggs.—48@50c per doz.

Butter.—Country, 55@60c lb.; separator, 65@70c lb. Milk, 10c qt.

Poultry.—Hens, 27@28c lb.; springers, 30@32c lb. Dressed, 75c@$2 each.

Vegetables.—Potatoes, 15@60c ½ pk.; $2 per bu. Cabbage, 3@8c head. Beets, 4@5c bunch. Radishes, 5c bunch. Onions, 5c bunch. Lima beans, 20c pt. Soup beans, 12@15c pt. Celery, 5@12c stalk. Rhubarb, 3@5c bunch. Egg-plants, 5@12c each. Beans, 5@10c ¼ pk. Lard, 40@42c lb.

Fruit.—Apples, 10@15c per box; 12@40c per ½ pk. Blackberries, 15@20c box. Plums, 10@20c box. Peaches, 10@15c box; 30@50c ½ pk.; $1.50@2 per basket.

Retail Grain Market.—Wheat, $2.40; corn, $2.25; oats, $1.10 rye, $1.65; bran, $3 per cwt.; middlings, $3.50 cwt.

Wholesale Grain Market.—Wheat, $2.10; corn, $2.10; oats, 90c; rye, $1.40; bran, $55 per ton; middlings, $70 per ton.

BALTIMORE PRODUCE

Baltimore, Md., August 11, 1919.

Produce.—Potatoes, new, No. 1, $3.50@4 cwt.; do., No. 2, $2@2.50. Cabbage, new, $1@2 crate; do, $5@8 per 100. Lettuce, $1@1.25 basket. Onions, nearby, $2@2.25 basket. Rhubarb, 2@3c bunch. Cucumbers, 25@35c basket. Carrots, 2@2½c bunch. Green beans, 40@75c bu.; do., wax, 50@80c bu. Lima beans, $2.75@3.25 bu. Beets, 2@2½c bunch. Green corn, 20@32c doz. Tomatoes, 50@75c basket. Squash, 20@30c basket.

Fruit.—Apples, No. 1, $5@7 bbl.; No. 2, $2.50@4.50 bbl.; $1@2 bkt. Blackberries, 18@23c qt. Huckleberries, 18@22c qt. Cantaloupes, 50@90c basket. Peaches, $1@2.50 crate. Watermelons, 25@55 per 100. Pears, 1@2 bu.

Butter.—Creamery, western fancy, 57@57½c; choice, 55@56c; pound prints, 58@60c. Nearby rolls, 46@47c. Dairy prints, 46@47c.

Eggs.—State, Pennsylvania and nearby, 45@46c; Eastern Shore and Virginia, 45@46c; Southern, 44@45c.

Live Poultry.—Springers, 35@38c lb.; old roosters, 22@23c; old hens, 35@36c lb.; ducks, young, 30@31c; do., old, 25@26c; guinea fowls, 90@$1.

Grains.—Wheat, new No. 1 red, $2.38¾; do., No. 2, $2.35¾; do., No. 3, $2.31¾; garlicky, $2.29¾@2.36¾. Corn, bag lots, No. 3, $2.15 bu. Oats, standard, white, 93c; No. 3 white, 92c. Rye, nearby, $1.55@1.75 bu.

Hay.—No. 1 timothy, $44@45c ton; do., standard, $44@44.50 ton; light clover, mixed, $41@43 ton. Clover, mixed, $38@42. Clover clear, $35@37 ton. Tangled rye straw, $12@14.50. Wheat straw, $10@11.50 ton. Oat straw, 12@14 ton.

Mill Feeds.—Winter wheat bran, $63 ton; brown middlings, $63 ton; white middlings, $73 ton.

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NEW YORK PRODUCE

New York, August 11, 1919.

Butter.—Unsettled; receipts, 12,173; creamery higher than extras, 54@54½c; creamery extras (92 score), 53@53½c; firsts, 51½@52¾c; packing stock, current make No. 2, 46c.

Eggs.—Irregular; receipts, 14,798; fresh gathered extras, 54@55c; fresh gathered extra firsts, 51@53c; firsts, 47@50c; state, Pennsylvania and nearby western hennery whites, fine to fancy, 67@68c; do., prime, 55@56c; state, do., browns, 59@62c; do., gathered browns and mixed colors, 52@55c.

Cheese.—Steady; receipts, 5,203; state whole milk, flats, current make, specials, 32@32½c; do., average run, 31@31½c; state, wole milk, twins, current make, specials, 32c; do., average run, 31@31½c.

Live Poultry.—Weak; chickens, 36@40c; fowls, 33c; old roosters, 22c; turkeys, 25@30c; dressed, steady; broilers, 31@43c; chickens, 36@40c; fowls, 25@40c; old roosters, 20@25c; turkeys, 40@49c.

Vegetables.—Potatoes, Jersey No. 1, $5.50@5.75 bag; No. 2, $2.50@3 bag. Beans, green, $1@1.50 basket; do., wax, 50c@$1.50 basket. Beets, $1.50@3 per 100 bunches. Carrots, $1@2 per 100 bunches. Cabbage, $3@8 per 100. Lettuce, 50c@$1.75 basket. Tomatoes, No. 1, $1@2.50 box; culls, 20@75c.

Fruit.—Apples, $1@3.25 basket. Peaches, $2@4 crate. Jersey, $1.50@3 crate. Currants, 7@14c quart. Blackberries, 15@25c quart. Huckleberries, 18@33c quart. Muskmelons, $1@1.50 crate.

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PHILADELPHIA LIVE STOCK

Philadelphia, Pa., August 11, 1919.

Receipts of live stock for week ending August 9 were as follows:

	Beef Cattle	Sheep and Lambs	Hogs
Total for Week....	1,924	7,862	2,480
Previous Week....	2 106	5,076	3,547

Calves.—Receipts of calves last week were 1,338 head against 1,920 head week previous.

Beef Cattle.—The market for desirable grades ruled steady, with a fair demand that kept the offerings pretty well cleaned up. Steers, good to choice, $15@16.50; do., fair to good, $13.50@15; common to fair, $12@13.50; cows, fat, per lb., good to choice, corn fed, 9@11c; fair to good, 7@9c; do., common to fair, 5½@7c; bologna cows, 4½@6½c; calves, extra choice, $20.50@21.50; fair to good, $18@19; common, $12@15; heavy, $7@10.50; Tennessee, choice, $18@19; other southern, $8.50@12.50.

Sheep and Lambs.—Sheep were in fair request and steady, with supplies moderate. Lambs of choice quality were in small supply and firm, but medium and poor stock, which comprised the bulk of the supply, was dull and irregular, with prices favoring buyers.

Sheared wethers, extra, $11@11.50; good to choice, $9.50@10.50; medium, $7.50@8.50; common, $4@5; ewes, fat, heavy, $9@10.50; spring lambs, choice, $17.50@18; medium, $12@14; do., culls and common, $8@11.

Hogs.—Demand was fair for desirable stock and the general market ruled steady under moderate offerings. Quotations for best westerns, $24.50; Pennsylvania and Maryland, $22.50@23.

City Dressed Stock.—The market for steers, heifers and cows ruled firm and higher, with demand fairly active. Other descriptions were in moderate request and generally steady. Quotations: Steers, 26@27c; heifers, 20@24c; cows, 13@19c; city dressed, choice, 28@30c; country dressed, 23@25c; sheep, 20@23c; lambs, spring, 30@32c; hogs, 31@32c.

LIVE STOCK

New York, August 11.—Beeves.—Receipts, 4,500; firm. Steers, $10@17; oxen, $7.50@13; bulls, $7.50@12; cows, $4@11.50.

Calves.—Receipts, 3,800; strong. Veals, $18@25; culls, $14@17; skim milk and fed calves, $10.25@13; grassers, $9@11; yearlings, $7@9; westerns, $15@16.

Sheep and Lambs.—Receipts, 14,530; steady. Sheep, $6.50@10; culls, $4@6; lambs, $14@19.50; culls, $10.50@12.

Hogs.—Receipts, 4,120; steady. Light to fairly heavy hogs, $23@23.50; pigs, $22; roughs, $20.50.

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PHILADELPHIA HAY AND GRAIN

Philadelphia, August 11, 1919.

Baled Hay and Straw.—Receipts, 60 tons hay, 3 cars straw. Hay firm and in fair demand. Straw quiet. Timothy hay, according to location: No. 1, nominal; No. 2, $36@37; No. 3, $32@33. Clover mixed hay, light mixed, $36@37; lower grades, $31@35. Straw, No. 1 straight rye, $13.50@14; No. 2 do., $12.50@13; No. 1 tangled rye, $13@13.50; No. 2 do., $12@12.50; No. 1 wheat straw, $12@12.50; No. 2 do., $11@11.50; No. 1 oat straw, $12@12.50; No. 2, $11@11.50.

Bran.—Lower. Car lots, including sacks: Soft winter bran in 100-lb. sacks, per ton, $49@50; spring bran in 110-lb. sacks, per ton, $48@49.

Wheat.—No 1 Red Winter, $2.39; No. 2, $2.36; No. 1 garlicky, $2.37; do., No. 2, $2.34.

Corn.—Yellow, in car lots, $2.10@2.14.

Oats.—No. 2 white, 85½@86c; No. 3, 84½@85c.

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NEW YORK HAY AND GRAIN

New York City, August 11, 1919.

Feed.—There was a very strong undertone to the feed situation all last week, with prices again advancing as stocks decreased and offerings were correspondingly less. Buyers were not inclined to take hold, however, taking only such lots as they needed for current requirements.

Quotations: City feed, bran, $49; middlings, $69 in 100-lb. sacks; red dog, $70, nominal, in 100-lb. sacks; Western spring bran $49@50; standard middlings $60@61; flour middlings, $65@66; red dog, $71@72, all in 100-lb. sacks, 30-day shipment. Oat feed, $31@32; rye middlings, $48; white hominy feed nominal, all in 100-lb. sacks. Cottonseed oil meal, nominal; linseed oil meal, nominal, in 100-lb. sacks.

Hay and Straw.—Trade continues to fall off, new invoices are running somewhat heavier and market easier. We see no change in values of large bale hay and hardly sufficient change in small bales to warrant changing quotations, tho in some instances these prices are being shaded. Rye and oat straw steady and unchanged.

Hay.—No. 1 large bales, $46@48 ton; No. 2, $44@46 ton; No. 3, $40@42; shipping, $36@38 ton. Fancy light clover mixed, $43@45 ton. Clover, No. 1 mixed, $39@41.

Straw.—Per ton, No. 1 rye, $15@16; No. 1 oat, $11@12.

Wheat.—No. 2 red, $2.37½; No. 2 hard winter, $2.37½.

Corn.—No. 2 yellow, $2.26½; No. 3 yellow, $2.25½.

Oats.—No. 2 white, 88c.

Rye.—Export, $1.65½.

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PHILADELPHIA DAIRY MARKET

Philadelphia, August 11, 1919.

Butter.—Receipts, 3,733 tubs. Demand was fair for fine goods, and the market ruled firm with moderate offerings of this class of stock. The undergrades were quiet at inside prices. Fresh solid-packed creamery, extra, 55½c; high-scoring goods, 56½@58½c, the latter for jobbing sales; extra firsts, 55c; firsts, 52½@54½c; seconds, 50@52c; thirds, 47@49c; sweet creamery, choice and fancy, 57½@59½c; do., fair to good, 52½@56½; ladle-packed, as to quality, 47@49c; packing stock, 45@46c; fancy brands of nearby prints, jobbing at 61@63c; good to choice, 56@60c; fair, 51@54c.

Cheese was steady, but quiet. New York and Wisconsin flats, current make, 33@33½c; specials higher; fair to good, 31½@33½; specials higher; fair to good, 31½@32½c; jobbing sales of fancy goods, 34@35c.

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NEW YORK MILK MARKET

New York City, August 11, 1919.

The demand was less active at the opening and some milk was going to manufacturers; at the close of the week, weather more favorable and business better. The rate for August in 200-mile zone for 3 percent milk is $3.13 per 100 pounds; add 4c per 100 for each one tenth of 1 percent extra butterfat.

Receipts of milk and cream in 40-quart cans for the week ending August 9, 1919, were as follows:

Railroads	Milk	Cream
Erie	42,157	5,886
Susquehanna	5,771	892
West Shore	14,763	2,205
Lackawanna	58,762	3,920
N. Y. Central (long haul)	168,631	4,959
Ontario	44,892	1,912
Lehigh Valley	48,498	1,381
New Haven	6,772	78
Pennsylvania	12,226	465
Other Sources	6,300	100
Totals..........	408,772	21,698
Same week last year.....	409,697	20,033

CHEESE MARKETS

Sales of cheese on the Utica Dairy Board, August 4, were 2,200 boxes. The basis of settlement price was 31¼c. The curb ruling was 31½c, as against 31⅝c last Monday.

WOOL MARKETS

The Boston Commercial Bulletin of August 9 says: "The wool market has experienced a week of midsummer dullness, sales being in spots. Prices, however, have been maintained on a steady basis. Very little is now being purchased in the west.

"The foreign markets are all reported steady. The English Government has allotted 19,000 bales of Colonial wool to American purchasers out of the sales commencing August 11.

"The goods market is strong, with comparatively little excitement."

Ohio and Pennsylvania Fleeces.—Delaine, washed, 88@90c; delaine, unwashed, 78@82c; ½-blood, unwashed, 83c; ½-blood combing, 80@81c; ⅜-blood combing, 71@73c.

Michigan and New York Fleeces.—Fine, unwashed, 59@60c; delaine, unwashed, 68@72c; ½-blood, unwashed, 75@78c; ⅜-blood, unwashed, 70@71c.

Wisconsin, Missouri and Average New England — Half-blood, 72@75c; ⅜-blood, 68@70c; ¼-blood, 64@65c.

Virginia, Kentucky and Similar.—Half-blood, unwashed, 81@82c; ⅜-blood, unwashed, 73@74c.

TOBACCO MARKET

Drenching rains detracted somewhat from the outlook as heretofore reported. This, together with neglect in cultivation made necessary by the pressure of harvest work, seems to preclude maximum results, but the tobacco plant is capable of surprising outcome late in the growing season. From now on to cutting the crop will receive better attention, and favorable results may yet be attained. The reduced acreage, however, is now an established fact, but the reduction is not as pronounced as was thought heretofore. The latest federal tabulation indicates a total of 41,000 acres in Pennsylvania, which is 90 percent of that of last year. The acreage in the other cigar leaf localities is given as follows: Ohio, 78; New York, 90; Wisconsin, 98; New England, Georgia and Florida, 100 percent, as compared with 1918. Upon the whole, the reduction is not as pronounced as was expected, but should be sufficient to greatly stimulate values on old tobacco as well as new when it is ready for market. But few sales were reported during the week, these being at prices about the same as during recent weeks. In some localities growers were seen delivering to local points tobacco evidently sold very recently, but it was impossible to procure reliable information as to prices. In Ohio it was reported that the Growers' Association refused $17.50 per cwt. for 2,000,000 pounds held by that organization. It was also said that banks in this locality were making special arrangements to finance growers who were unable to longer hold their tobacco without aid. This should enable those concerned to await still better prices, which seem evident in the near future. But it is not to be overlooked that values are now more satisfactory than they were a few months ago.

The Greatest Gift You Can Make Your Farm

INSTEAD of wasting the best part of the plant food in your stable manure through wasteful methods of handling and spreading, start treating your farm *right* by presenting it with a NEW IDEA. It is the one best gift you can make your farm--allowing you to spread manure direct from your stable while the richest fertilizing elements still remain--not only to give *food* to your soil, but to add humus, improve its texture, increase its water absorbing powers, and make it warmer and more friable.

NEW IDEA Registered U.S. Pat Off
The Original Wide Spreading Spreader

ANY NEW IDEA owner will tell you that this is the spreader for your needs. The plain truth of the matter is that no other manufacturer can possibly give you so much spreader for the money! The NEW IDEA is made in the oldest and largest exclusive spreader factory in the world. It leads the field by a big margin--the choice of every practical farmer able to compare it with other makes.

Note these Features

The NEW IDEA spreads a full seven feet wide, laying an even blanket of well shredded manure on every square foot of ground. It was the first spreader to give this wide spread and is still far superior.

It is low down--light work to load. It hauls easy--heap it 30 inches high and your team can handle it over any ground. Operates with a chain sprocket wheel drive that does away with all gears and gear trouble and saves wear. Solid steel frame construction. Big patented steel distributor and two pulverizing cylinders. Lever adjustment for feeding 3,6,9, 12 or 15 loads to the acre, as you wish.

The NEW IDEA Guarantee

THE NEW IDEA is as strong as a spreader can be made. Every unnecessary part has been left off. Every part that bears a strain has been amply reinforced. Use it every day the year around--work it hard--it is absolutely guaranteed for a full year against breakage from any cause.

Pays For Itself

You can't put any other machine on the farm that will pay for itself in its first year's use. And that's just what this spreader will do. In hundreds of instances it has earned double its cost, year after year---the best investment you could possibly make.

Let Your Dealer Show You

Let your NEW IDEA dealer figure this proposition for you in dollars and cents. He will prove to you that the NEW IDEA can't be beat as a profit maker on your farm. And he will show you, point by point, how the NEW IDEA Spreader excels.

So don't buy any other spreader before you have had a chance to judge. If there is no dealer in your town, write us. We will give you all the facts regarding this better machine. Also, a free copy of the famous book, "Feeding The Farm."

NEW IDEA SPREADER COMPANY
Spreader Specialists
COLDWATER, OHIO

The Contest on Overlook

By WILLIAM GERARD CHAPMAN

A moment after the train came to a stop at Greenville, the youthful appearing passenger in the day coach rose from his seat and walked carelessly down the aisle toward the door. A red-faced man seated further back in the car glanced up, frowned, and brought himself together in a quick movement that poised him on the edge of the seat like a plump bird about to launch itself from a limb. The young man stopped at the water cooler and in a leisurely manner helped himself to a cup of the tepid contents—whereupon the florid-visaged one grunted relievedly and relaxed, though still keeping an unobtrusive eye on the other.

The engine whistled, the train quivered, jerked and started, and the stout person sagged deeper into the red plush and sighingly brought his respiration back to its normal. Then suddenly he leaped to his feet, his lips forming a suppressed oath, and bounded down the aisle. The young man had abruptly dropped the tin cup from which he had been reluctantly sipping, jumped through the door, side-stepped the startled conductor who was just entering, and swung off the steps to the cinders. Only a spry youth could negotiate the leap, and besides, the clumsier man had been blocked by the conductor, and when he gained the platform the speed of the train made alighting impossible.

"Blast the whelp!" he exploded. "Hey, conductor, stop the train—stop it, I say! Give you ten dollars if you'll stop her!"

The conductor, still puzzled beyond speech, looked covetously at the greenback, then spat philosophically over the steps and recovered his tongue sufficiently to say, "Cain't do it, sir; cain't do it noways," and passed on into the car to remove himself from temptation. The stout man, his face now a still ruddier crimson that verged alarmingly on apoplexy, spoke unkind words to himself for his foolish impulse and returned to his seat, to speculate on the sudden move of the youthful passenger.

Perhaps the lad's action was entirely natural; he might suddenly have decided that he wanted to get off there—or he had not heard the station called and saw the name board just as the train pulled out. He couldn't possibly have known he was being followed, and therefore wasn't trying to evade anyone. Anyway, it would have been an unwise move to follow him from the train in that fashion; it would have given the game away with nothing to be gained. He mentally blessed the conductor for refusing his request.

Lane Parker, when the momentum of his flying leap had exhausted itself, dug his heels into the sloping cinder bank, and turning at right angles to the track, struck off into the hills without even a backward glance at the train. At no time during the hour's ride from Chattanooga had he evinced by look or manner the slightest interest in the stout passenger. A veiled scrutiny of the car's occupants when he boarded the train had satisfied him that this florid individual was the man against whom he had been warned; and his actions as Lane left the train, observed from the corner of an eye, had proven the identity. "Might as well fool him as far as I can; he won't be sure that I was onto him, and he'll try to think I just naturally decided to get off as I did for purely personal reasons," Lane mused as he trudged over the hills. His objective was a cabin nestling in the hills not many miles from where he had left the train, and he believed he could reach it almost as quickly as tho he had gone on to Hicksville and thence by buckboard.

Lane "holed up" in the cabin of Jud Waring for nearly a week to throw his pursuer off the scent. He had visited there a few weeks earlier after Jud, a former fellow townsman, had written him at his home in the Vermont hills of something peculiar that he had noticed in the soil on a slope of Overlook Mountain. Jud's Yankee curiosity had impelled him to send a specimen of the soil to Lane, who had dipped into chemistry at the Academy back home, and Lane had found it to contain bauxite, a disintegration of feldspar rich in alumina, from which commercial aluminum is derived. Large deposits of bauxite are scarce, and the Aluminum Products Corporation was always in the market for tracts containing them, as he had ascertained by careful inquiries of several manufacturers by letter.

All this sounded to Lane very much like the knock of Opportunity for which he had held a listening ear ever since Patty Witherspoon had entered into his scheme of life. The acres of his father were few and worn—he had toiled his share in wearing them out since he was knee high to a milking stool—and his thoughts for two years had centered on the purchase of an adjoining farm which was for sale. Possession of these acres and the modest house and farm buildings they surrounded would mean possession of Patty. Jared Witherspoon would not give his daughter to a landless, penniless youth—but Patty had been willing to wait. Lane was industrious and enterprising, but it was a discouraging task to get together even the modest sum needed for a first payment on the property, with the very limited business opportunities afforded by a farming community. He never could do it with the savings from farm wages, and he was alert for the chance to get at something more lucrative. And then the glittering prospect of locating a bauxite deposit had come out of a clear sky.

He drew his slender savings from the bank, after confiding to Patty the tale of golden promise, and with her buoyant encouragement singing pleasantly in his ears journeyed from his own Green Mountains to the richer hills of Tennessee. Directed by Jud Waring he had found the slopes containing the rich clay, and satisfied with the depth of the deposit by making borings, he sought the owners and secured options on several small tracts for a few dollars. Only on one side of the mountain did he find the precious clay. The land itself was barren and considered nearly worthless by the owners, and they were delighted with the opportunity to get rid of it at the very fair price Lane offered. He made a mental reservation to pay them a very fair bonus over the purchase price when the ultimate sale to the aluminum concern was completed. Thus he salved his New England conscience, which began to prick him slightly at the thought of buying these rich deposits at such ridiculously low figures.

A Red Cross Auxiliary Composed of Farmers' Wives and Daughters, Lackawanna County, Pa.

One of the biggest tracts, and from indications the most valuable, was held by a farmer who was visiting his son in the western part of the state, and Lane learned that he was due to return in about two weeks. He would sell; his wife assured Lane of that. The price offered was well above what the land was valued at, and the farmer's wife was as anxious for her husband's return as Lane was. He must take his chances of meeting this man later, and perhaps it was just as well, as Lane had about exhausted his funds.

He returned home, his pockets heavy with clay but empty of cash, with his amazing tale of riches held in the common looking stuff he exhibited. Lane sold his horse and buggy and his yoke of yearling steers, borrowed all the money he could, and persuaded his father to mortgage the farm to complete the sum necessary to take up the options. Lane gave assurance of the immediate marketability of the land, and showed in substantiation the letters from his aluminum people of whom he had inquired. With the funds in his possession he returned to Tennessee. The morning after he arrived in Chattanooga there came a letter from his father. The missive read:

Dear son: There has been a man here just after you left Wednesday asking for you at the village. I think he means no good. He came down to the house and I told him you had just gone to Chattanooga and he looked took aback and then tried to pump me. I didn't tell him much. Said his name was Hammersmith, or some such. He went back to the village and took too much and talked about how he knew what you were up to and he would trail you and find out. Lemuel Peters came down to tell me about it. The man showed a letter you had written to some company asking about Bauxite. Look out for him. He is a squatty sort of man, fat, with a red face and bald. I am writing this in haste as I reckon he might turn up down there, as he left the next day and asked Sim Hankins at the depot about train connections for the south.

Lane pondered over this new and slightly disturbing factor in his plans. He had yet to secure the biggest tract, and the interloper, who doubtless had designs on Lane's discovery, might cause complications. He kept an eye out for a squatty sort of man while he remained for another day in the city to buy some new soil augers. Then the next day, on the train bound for the mountains, he had run squarely into him—or at east so it had seemed.

Jud Waring lived alone in a cabin of his own building in the highlands of eastern Tennessee. A rover by inclination, he had left the hills where he had been born to "see the world," and after a year or so of mild adventure, found himself in the Great Smokey Mountains, where the lure of the wild and rugged knobs held him fast. Rifle and fish-hook brought him all that he needed to supply his wants, and he spent his time in prospecting for coal, which lay somewhere in the hills.

He was more curious than hopeful over the result of his enterprise in sending Lane a specimen of the peculiar earth formation he had noticed while on one of his prospecting tours, "I reckon it may be something as good as you say," he said to Lane as they sat before the cabin during the last of their evenings together, "but I can't noways sense its value. I've never heard tell of aluminum, but then you've had a sight more schooling than me, and I reckon you know. If it pans out big enough you can give me a quarter of what you make and we'll call it 'square.'"

They discussed the probability of Lane's follower stepping in and interfering with his plans for acquiring the principal bauxite tract should he discover the location of the deposits; and various means of throwing him off the trail were suggested. Far into the night they talked, with the result that Lane wrote out an order for delivery of the boring tools to Jud, who would go to Hickstown and get them the next day—when Lane also would leave for the purpose of taking up his options. These would expire in a few days, and when the deeds were safely filed, he still had to find the owner of the biggest tract and negotiate its purchase before the interloper discovered the location of the find. Lane felt that the fellow would endeavor to seek out his sphere of activity with the cunning of a fox; his quick jump to Tennessee and picking up Lane's trail at Chattanooga indicated pertinacity and craftiness, and Lane's intuition warned him that he had a dangerously capable opponent in the squatty man with the red face.

Lane took up his options, paying over the cash to each owner, and with the deeds in his pocket journeyed to Hickstown, the county seat, to file them; and not until they were safely in the hands of the recorder did he venture to show himself in the one hotel of the town.

As tho in fulfillment of a wish, a short, fat, red visaged man sat dozing in a chair in the fly-specked, dingy office of the hostelry. Lane saw him glance up, waken instantly, and then drop back into his sleepy state of boredom. Five minutes later, as the newly arrived guest turned on the stair-landing on his way to his room, he saw the occupant of the office chair rise, walk over to the register and scan it with seeming satisfaction.

Just after Lane had seated himself in the hotel dining-room that evening, the stout man entered and after a word with the negro at the door was shown to a seat at the same table. As he sat down he looked instantly at Lane, started with pleased surprise, and shot out his hand across the gray, spattered cloth.

"Well, well," he cried. "I'm sure it's Lane Parker—aren't you Lane Parker, of Mapleton, Vermont? Of course you don't remember me—you were only a little shaver when I was there last. But your father and I knew each other well, years ago. Ever hear him speak of Godfrey Hammerton?"

"Yes, I think so," admitted Lane, eyeing him with a frank scrutiny. "Yes, I am quite sure I do remember him speaking of you. And I really believe I remember you myself, tho of course it was a long time ago and I mightn't have recognized you if you hadn't spoken." Lane's smile showed real pleasure at meeting an old friend of the family in such a lonely, out-of-the-way spot.

"This is certainly great luck, my meeting you down here in this neck o' the woods. Just ran down for a few days' turkey shooting. What brings you so far from home, Lane? I suppose I can call you that, my boy."

"Oh, been visiting a fellow I used to know back home; lives near here in a cabin in the timber. And prospecting around some. How's the shooting?"

"Fine. What say we go out together for turkey tomorrow? Good! We'll get an early start and put in the day."

The meal passed pleasantly for both men, and Hammerton's hospitality, that of an earlier arrival to the newer guest, would not brook the danger of Lane becoming lonely in a strange place. Until bedtime they talked of many things, the conversation frequently being led around by the older man to the possibilities of rich mineral deposits in the wild hills that surrounded them.

"I shouldn't wonder a bit," offered Lane, when the topic had been adroitly introduced for the sixth time. "Fact is, I may want to ask your advice about something."

"Be glad to give you the benefit of what I know about minerals, my boy, any time," interrupted his companion with a degree of eagerness. "What is it? Here, have a smoke. Now let's sit here comfortably and let the old man air his knowledge of—what did you say it was you wanted to know about?"

Lane rose and yawned sleepily. "Thank you. That's mighty good of you, but I'm tired to death to-night, and you must be too. I won't bother you with it now. Some other time. Guess I'll go to bed. Good night."

Hammerton concealed his disappointment bravely, but his good-natured laugh was a little forced. "Guess you are about all in. Well, another time then. See you tomorrow at six-thirty. Good night."

Lane went to his room well satisfied with the drift of affairs. He no longer feared Hammerton. To keep him occupied with his endeavors to extract the information he sought would be an easy task, and one not wholly unamusing to the Green Mountain boy. Then, until the return of the farmer who owned the big tract that Lane could not bear the thought of losing, he would guide Hammerton's pernicious activities so that they would bring down upon him his just deserts for the questionable methods he was employing to get hold of the bauxite deposits.

Lane had waited until now to read the letter from Patty that had awaited him at the Hickstown post office and to this pleasant duty devoted himself before turning out the coal oil lamp. Then, with his mind cleared of scheming plans and filled with thoughts of a well-kept farm in the Vermont hills, with Patty singing about her tasks in a snug little white-painted house with green shutters, he sought his corn-husk mattress to dream of the day when this would come to pass.

The quest of wild turkeys the next day led the two sportsmen thru a bewildering variety of cover. Hammerton seemed willing that Lane should lead the way, only occasionally taking the initiative himself. The older man made several casual attempts to introduce the subject of mineral deposits, but none was successful. The younger and more enthusiastic sportsman at each allusion to the subject became vitally interested in the proximity of game, and a warning "S-sh!" brought silence and an interest, well simulated even if perfunctory, in the possibility of flushing a gobbler. Between them they brought down three fine turkeys before the morning was over.

At noon they stepped out of a "slashing," dense with brush and second growth, onto an outcropping of rock that overlooked a beautiful and rugged prospect.

As Lane glanced about he came to a sudden stop and turned to face his companion. "Let's find a better place for lunch; it's too windy here." He spoke hurriedly and started back into the timber. His manner betrayed to the older man an agitation that invested the spot with new interest. Hammerton laughed reassuringly, and, seizing Lane by the shoulder, forced him with an air of amused tolerance to a seat on a windfall.

"Now, let's stay right here, Lane. We can't find a better place for eating lunch," he laughingly insisted. "This little wind shouldn't feaze a Green Mountain boy!"

"Oh, all right, if you say so," Lane grudgingly assented, and turning away from the view nervously attacked the cold snack they had brought with them.

"Great view, this," Hammerton remarked genially, and scanned the panorama with appreciative and curious eyes. Something over on the slope of a high hill which had been denuded of timber seemed to hold his glance. He looked curiously at Lane, who seemed oblivious to everything but the sandwich he was munching.

"That's Overlook Mountain, isn't it?" Hammerton asked, pointing to the scarred eminence. "Ever been over this way before?"

"That's what they call it, I think," responded Lane, glancing up. "Yes, I've been looking around some hereabouts. Better eat your share of lunch, or it'll all be gone."

The slope of Overlook Mountain was dotted here and there with clear evidence of earth borings, and Lane knew that the practiced eye of the bauxite expert had instantly discovered the indications of recent tests. When they finished their lunch, Hammerton seemed quite as willing as Lane that they return to the hotel, and they struck off in nearly a straight line for the town, having mutually agreed that they had shot enough game for one day's sport.

They ate supper together that evening, but both appeared tired from the day's tramping and separated soon after the meal to go to their rooms. When Lane went to bed his mind was busy with a variety of thoughts, which, however, did not prevent him from falling instantly into untroubled slumber.

The next morning Hammerton did not appear, and Lane learned from the clerk that he had departed at daylight in a livery rig, saying that he was called away suddenly and would return in a day or two. This was exactly what Lane had expected, and after breakfast he left the hotel.

On the second morning following, Lane returned to Hickstown. While seated in the hotel office happily immersed in a letter from Patty, he was brought back to a realization of his immediate affairs by a heavy slap on the shoulder. Hammerton stood before him, a self-satisfied grin curving his lips.

"Well, my boy," he rumbled, "that was a corking fine bauxite deposit you uncovered there on Overlook Mountain! Just finished getting under option what I didn't buy outright. Cost me so far fifteen thousand dollars, and worth a whole lot more."

"Do you mean the land that we could see from where we ate our lunch the day we went after turkey?" Lane asked the question coolly.

"Sure. I'd been willing to bet you couldn't keep away from your discovery if I gave you plenty of rope. And you weren't quick enough to keep the old man from spotting it, either, when you tried to turn back." He chuckled gleefully over the memory.

"You're certain it was my discovery you're speaking of?" Lane persisted, seemingly unable to understand the full significance of what he heard.

"You bet I am. It's the slope you tested to a depth of thirty-two feet. Phew! that must have been some work. Saved me a lot, for I only had to look at the cores to see the value of it."

"Then you just depended on what you found on the surface? Didn't make any borings at all?"

"Didn't have to. Don't you think I know bauxite when I see it? Why, my boy, I'm the head of the mining department of the Aluminum Products Corporation, and I can tell the hydrate as far as my eyesight carries."

"Well, all I can say is you're as fine an example of business buccaneer as ever cruised on land. You only lack a cutlass and a red bandanna around your head to complete the picture of one of your distant relatives who looted ships."

Hammerton exploded into a roar of genial laughter. "Why, bless me, my boy," he gurgled, "you flatter me. Can't make me mad. We've got to have bauxite, and if we can't get it one way, why, we must another."

"Glad you feel flattered," Lane responded dryly. "But, seriously, I can't understand why a level-headed business man would be willing to pay out several thousand dollars for land merely on the strength of surface indications."

"Why, what do you mean, boy?" A note of worry crept into his voice. Lane's confident tone was slightly disconcerting. "Only that you'd better make some borings yourself." Lane eyed the puzzled expert with a tolerant smile.

"Let's have it. Where did my foot slip?" demanded Hammerton with a mirthless grin. Something in Lane's manner convinced him that he had erred at some point in his piratical operations.

Lane recounted his experiences up to the time when Hammerton had recognized him at the hotel as the son of an old friend, not omitting the details of his knowledge of Hammerton's espionage from the time of the latter's visit to Mapleton. The expert's face grew longer and longer as the tale proceeded, but he permitted himself the indulgence of an occasional grin of somewhat sheepish quality as his sense of humor rescued him from utter humiliation.

"But I don't understand yet how you've ditched me," he complained as Lane paused. "I've cinched that rich slope of Overlook Mountain, haven't I? That's the main point."

"Yes, you've got hold of the south slope of Overlook Mountain, all right, and it's a fine sheep pasture, tho rather expensive at the price you paid for it; but all the bauxite it holds is in the cores of my borings of the north slope which my friend Jud Waring carried over and spread around. That was while you were trying to pump me here at the hotel and during the morning of our turkey hunt, you know. Jud bored some holes in the south slope and threw the cores in the river, leaving those from my tract around the openings. I've got the deeds to my land in my pocket. Want to buy it?"

Hammerton rose and pulled himself together with an effort. His face gradually worked itself back into its habitual state of good-natured arrogance. Finally the old smile came back and expanded into a laugh of fairly generous proportions, and he slapped Lane almost affectionately on the back.

"You're one wise boy, Lane. I must be getting old. You've certainly put it all over me this trip. Yes, I'll buy your land—pay you fifty times what you've spent on it. I'm empowered, you know, to pick up any bauxite tracts I locate. Will you sell?"

"Yes, the amount satisfies me. When do you pay it?" Lane almost felt sorry for the man he had bested; he was a good loser, and his crestfallen manner was quite pathetic.

"I'll go out tomorrow and sink a few holes in both slopes just for luck, and then when I've proved it up I'll wire from Chattanooga for the money and take over your deeds there. So long, Pierpont." He bestowed a parting grin of admiration on his late adversary and went off to him room to pack up.

Lane waited until he disappeared around the bend in the stairway, and then rushed over to the railroad depot and sent off three telegrams—one to Patty, one to his father, and the other to the owner of the farm on which a little white-painted, green-shuttered house nestled in a grove of maples.

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Miscellaneous

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LIVE STOCK

ORGANIZING A COUNTY FOR BETTER HOGS

(Concluded from page 1)

piece 20034 and a grandson of Rivaleer's Royal Masterpiece 2d 172000. The popularity of this animal as a sire was evidenced from the start, and of the thirteen Berkshires offered at the first annual sale of the Cambria County Hog Breeders' Association, seven were bred to Rival's Son. A canvass was made to determine what stock would be available for a 1918 sale and the count showed 12 bred sows and gilts and seven open gilts; every animal to be registered or eligible to registry and each member pledging himself to register and transfer any animal sold by him at the sale.

Rival's Son 228006 Is Proving His Worth to the Association

The date for the first annual sale was set and two members of the association were appointed to act as sale managers. The secretary of the association kept in close touch with the consignors and from time to time publicity was given thru the local papers with reference to what was being done. A sale catalogue was prepared, which included the pedigrees of each animal offered for sale and the breeding dates of all animals entered as bred stock.

In arranging for the sale it was specified that all animals were to be in place in the sale pens by 10 o'clock on the date set for the sale. The object was to have the stock placed so that prospective buyers could have an opportunity to look over the stock before it was brought into the sale ring. In addition to the stock sold, one of the reference boars, Rival's Son, was on exhibit. So many of the sows to be sold were bred to him that prospective buyers were naturally interested in him.

The sale was well conducted, and in two hours' time the entire consignment, consisting of 23 head, had been sold. The total receipts of the sale amounted to $1,810. This included the amount paid for a pure-bred Berkshire sow pig that was first purchased by the consignors and then sold for the benefit of the local chapter of the Red Cross. The 22 head sold for breeding stock brought $1,700, or an average of $77.27 per head. These 22 head included fourteen bred sows, one unbred sow, and seven open gilts. Thirteen of the animals consigned remained in the county, nine going to adjoining counties, for breeding stock. The sale was run on a cash basis, and before the secretary and clerk left the grounds every animal had been settled for and the money was deposited in one of the local banks.

The items of expense attached to putting on this sale included auctioneer's expenses, bedding, drayage, material for erecting runways, rings, bleacher seats and the labor necessary to erect the same. Five percent of the gross receipts was sufficient to cover all expense. Each consignor to the sale expressed himself as well satisfied with the result and went on record in favor of making the sale an annual event and preparing immediately to have more and better stock to consign to such sale.

Results

The important results that we feel have been accomplished by the association work are:

First, a very appreciable increase in the number and quality of pure-bred hogs in Cambria County.

Second, a definite knowledge that pure-bred hogs are more economical for feeding out than grade or scrub stock. This was demonstrated by the men who fed out pure-bred gilts and barrows on pasture with highly satisfactory results, 100 pounds pork, live weight, being produced at a cost of 11½ cents per pound.

Third, an appreciation of the fact that in an organization the stock from individual farms can be gotten together, well advertised and offered for sale to better advantage than could be done by the individual breeders working alone.

Pure-bred hog breeding as a business for Cambria County farmers has come to stay.

FORAGE POISONING FROM DAMAGED GRAINS

I have noted suggestion to feed grain damaged by recent rains to stock. Is there not danger of fatal poisoning in certain cases where this damaged grain might possess an excessive number of pathogenic bacteria that were virulent in nature? This then would be classed as forage poisoning and as having originated from this one of various different sources. I had intimate knowledge of such outbreaks some years ago and have heard of others ever since.

Some years ago grain dealers had a store on the Raritan River at New Brunswick, N. J. The river rose and flooded a lot of grain. After the water receded the grains were spread out upon the floors to dry and then sold at a reduced price. Over 20 head of horses were affected, some with spinal meningitis and others with the cerebral form where the muscles of deglutition were affected and the animals unable to swallow.

At about the same time I was informed by Professor Neal of the Delaware College that a continuous rain had soaked the tops of oat stacks in certain sections of that state. When the oats were fed results similar to the above followed.

Some time later another rise in the Raritan River flooded the lower floor of another grain dealer's storage. This dealer also dried out the grains and sold them. The results, so far as I could learn, were that one party lost a three-year-old colt and a hog and had a Percheron mare left crippled in one hind leg. He also had a cow that did not die, but her udder was destroyed. A number of hogs belonging to different parties also died as a result of eating the damaged grains.—J. C. Higgins, Somerset Co., N. J.

Digestive disorders and various forms of meningitis as evidences of forage poisoning appear to follow the feeding of grains that have been watersoaked for short periods. In the absence of means of determining safe grains from those infected, it will be unwise for farmers to attempt to feed grain damaged in the recent rains.

SWAT THE PEDIGREED SCRUB

Thousands of pure-bred scrubs are scattered thru this country, according to hog-extension men of the U. S. Department of Agriculture, who are devoting their efforts to eliminating inferior pedigreed animals. This, they say, applies to all kinds of live stock, but is perhaps more general in the hog industry. Pedigrees are necessary and valuable to the hog breeder, yet the pedigree is the means of fooling a lot of farmers, particularly those who are about to start into the pure-bred hog business and who have not had enough experience in judging to select animals of good standard type. Buyers should not be contented simply with pure-bred animals, but should see in addition that the animals they are about to purchase have good quality, say the department hog specialists.

COUNTY NOTES

Montgomery Co., Pa., (SE) July 26.—Not for many years has there been such a long and steady downpour of rain as occurred in July, and the farmers lost heavily. The heaviest loss in Montgomery County seems to have been sustained by the farmers of Worcester township, who, owing to the scarcity of labor and the desire to thresh their grain directly from the field, had their entire crops destroyed. Among the losers are M. B. Benner, who lost 62 acres of wheat in shocks and 13 acres of oats, the total loss being $2,500; M. O. Landis lost 18 acres of wheat and 10 acres of rye, loss $1,600; Mrs. Katherine Cassel lost 20 acres worth $1,200; Morris Krauss, 18 acres, $800; John K. Heebner, 20 acres, $1,500. The damage to the oats crop has also been extensive. Blackberries are plentiful. Many of the farmers state that the long wet spell has caused the early potatoes to rot. About three miles of road will be built in Skippack township, and the gravel pike along the Perkiomen Creek from Collegeville to Ironbridge is being repaired.—H. M. E.

Cattaraugus Co., N. Y., (W) July 31.—Haying nearly all done; better than average. Corn growing fine. Very little wheat raised here. Oats are just ripening; are about an average crop. Beans and buckwheat are looking fine. Red raspberries and blackberries are looking fine; not much other fruit. Early potatoes a very light crop. Later planted look better and should be good if we get a good supply of rain. Have had two months of very dry weather with only a few light rains. Pastures are dried up badly, cutting down our milk production. A steady, moderate rain falling today, which will be greatly appreciated, as many wells are going dry. Springs and streams low. Not much butter made here and local markets take it all at a premium over quotations. Cheese, 32c; eggs, 50c; peas in pod, $2.25. Not many cows selling. What are sold go at $100 or better.—H. M. Beeles.

Don't throw your grain on a bare floor. Birds, like some humans, like to live with as little effort as possible. The less they do, the less they will do. Make them scratch for their grain in good deep, clean, dry litter.

Veterinary

Conducted by W. C. Fair, V. S.

Advice thru this department is free to our subscribers. Each communication should state history and symptoms of the case in full; also the name and address of writer. Initials only will be published. We cannot make reply by mail. This is one of the most valuable columns of the paper and we invite readers to make use of it. Clippings from this column, when properly preserved and classified, make one of the most valuable medical symposiums a farmer-stockman can obtain.

Irritation of Larynx.—One of my horses has for the past ten months been troubled with a cough. I have given him different kinds of cough remedies, but none of them have seemed to help him. He shows only this one symptom of sickness. When pulling a heavy load up hill his wind is good. A. S., Callicoon, N. Y.—If you will rub your horse's throat with one part tincture iodine and two parts camphorated oil every day or two, he will soon cough less. Keep him out of the dust, if possible. Give him one tablespoonful of powdered licorice in feed, twice a day.

Saddle Gall.—Some three weeks ago the saddle pad chafed the back of one of my horses. I applied carbolized vaseline twice a day, but instead of his back healing it is gradually growing worse. What line of treatment do you recommend? M. J. K., Honesdale, Pa.—Unless you change pad on your horse, treatment will do very little good. Dissolve 1 ounce acetate of lead, 1 dram powdered alum, 1 ounce tannic acid in one quart of cold water, shake well and apply to sore parts, three times a day.

Worms.—I have a brood mare that is thin. I have noticed her pass a few long worms, but she is seemingly healthy. She had a colt some three months ago and it is not yet weaned. A. J. K., Meadville, Pa.—After fasting your mare for twenty-four hours give her two ounces of turpentine in one and one-half pints of raw linseed oil every two weeks, until she ceases to pass many worms.

Curb.—We have a draft horse that has bunch on back part of hind leg, but he is not lame. Can bunch be removed? W. G. M., Sidman, Pa.—Apply one part iodine and eight parts fresh lard to bunch, twice a week. This ointment should be well rubbed into bunch.

Nodular Disease.—I have a flock of sheep that are not doing well. Every year I lose a few and those which died had a whole lot of small bunches on their bowels. Can you tell by my description what ails them? M. J. K., Honesdale, Pa.—Doubtless your sheep suffer from chronic nodular disease, an incurable sheep ailment. Market the fleshy ones and fatten the others. Feed them well. Giving an occasional dose of gasoline or turpentine will do some good, but will not cure them. Note directions for treating lambs in August 2 issue of Pennsylvania Farmer, page 10.

PENINSULA HORTICULTURAL MEETING

The 34th annual meeting of the Peninsula Horticultural Society will be held in Chestertown, Md., on January 6, 7 and 8, 1920. A number of prominent horticulturists from beyond the limits of the Peninsula will be invited to make addresses. It is expected that the apple show will be larger and better than ever before, as liberal premiums have been offered and most of the apple growers on the Peninsula have adopted up-to-date methods of fruit production, especially in pruning and spraying.

Cumberland Co., N. J., (S) July 28.—A few weeks of rain held up work and did a great deal of damage wherever wheat was out. The wheat sprouted in the shocks until they were a mass of green. Hot weather is now drying up the wet places. Potatoes are being dug and going to market at from $4.75 to $6.50 per barrel. Beets are going to the factories. Many of the tomatoes were ruined by the rains. Onions in the ground were also greatly damaged. The potato growers of Cumberland County met July 17 and 24 to discuss the potato situation and a seed potato growers' association was formed.—C. J. S.

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PENNSYLVANIA FARMER

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HANDLING THE PEACH CROP

How Progressive New Jersey Growers Handle Large Crops With Modern Equipment

By R. L. SCHARRING-HAUSEN

THERE are numerous peach orchards in New Jersey of considerable size, ranging up to fifty acres and over, in which the handling of the crop, especially during the Elberta rush, amounts to a pretty large proposition. With the labor supply an uncertainty, the growers have in most cases replaced hand labor with machines wherever possible, thereby freeing many hands for work that machines cannot do, and have arranged their packing houses to use to best advantage the labor that they have.

The "Michigan" Bushel Basket

The handling of a crop of peaches can be divided into the following parts, so far as the grower is concerned: (1) Picking. (2) Hauling to packing house. (3) Sorting and grading. (4) Packing. (5) Nailing on covers (the larger growers usually ship in the Georgia carrier). (6) Shipping.

Picking the Fruit

The majority of the large growers ship to New York, or points north, and use the Georgia carrier, or peach crate, as a container. The fruit is picked before it has become dead ripe, at an intermediate stage between that and greenness. At this point the dead green color of the peach assumes a yellow or creamy tint, easily recognized by the experienced picker. While the fruit is firm, it will separate easily from the stem. It is ruinous to pinch a peach to determine its ripeness.

The picking is done by large gangs, under the supervision of a boss or orchard foreman, who is responsible for the character of the work done. Italians do the picking in many of the orchards. The half-bushel peach basket, or the five-eighths basket, is largely used as a picking basket. There is a picking harness on the market which supports the basket in front of the picker. Without some such contrivance, such baskets are rather inconvenient. A better type is the handled oak-stove picking basket, shown in an accompanying illustration. This firm, smooth receptacle does not bruise nor mar the fruit readily. The pickers are instructed to be quick and careful. The fruit at this stage will stand considerable handling, but not rough treatment. If the trees are large, each gang is provided with a number of three-legged orchard picking stepladders.

Hauling to Packing House

In many of the large orchards, road lanes are provided at intervals by increasing the planting distance between two rows of trees. The pickers carry their filled baskets to these lanes, down which the wagons go. The wagons are low and flat, of the type shown. They are of course provided with springs. They return the empty baskets to the orchard.

The Packing House

One of the most conveniently arranged packing houses the writer has ever seen is that of Mr. Arthur J. Collins, Burlington County, N. J. Most of the photographs illustrating this article were taken there. The house is so arranged that the fruit comes in at one end and constantly moves toward the rear, as it undergoes the various operations of sorting, grading, packing, nailing and piling into tiers to await the motor truck that will haul the crates to New York. There is plenty of room in the building, and no confusion—points which favor the efficient and rapid handling of the fruit. A loft above the main floor, and a cellar below, provide storage space for empty crates, which are made up in odd times.

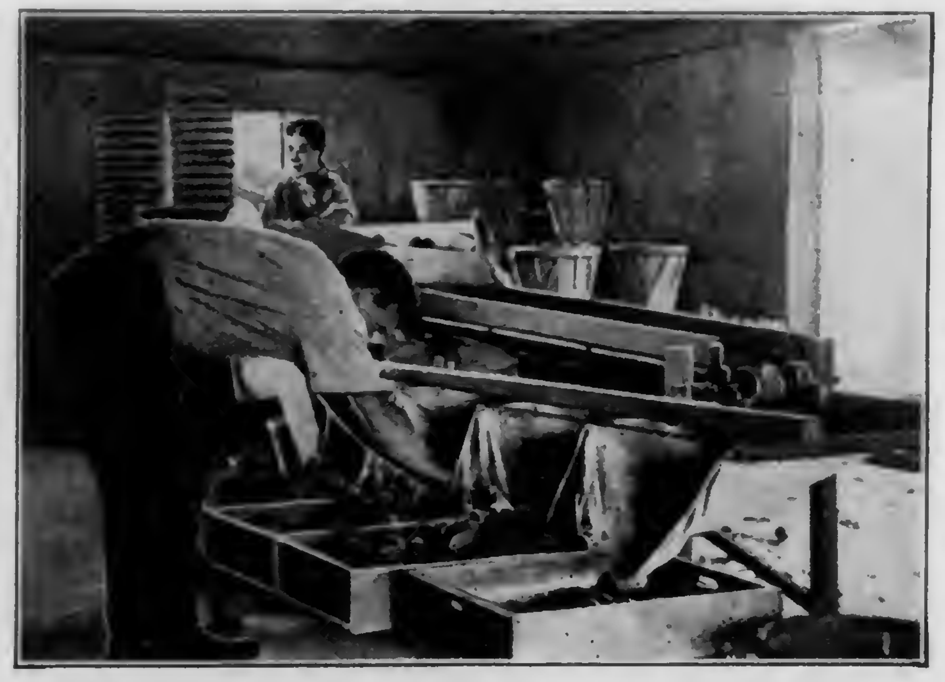
Sorting and Grading

The writer has had considerable experience and observation in packing houses where the peaches were graded (sized) by hand, and where the work was done by machine. It is his opinion that where the peaches are at the proper stage of ripeness, a mechanical grader does by far the better work, in regard to both quantity and quality. Where hand grading is practiced, it requires a person to grade for each packer, if the latter is at all proficient. The writer has seen a mechanical grader, run by a small gasoline engine, with two men to attend it, keep eight good packers busy, without running to capacity. That meant a saving of six men or girls to grade, or about $15 a day in wages. At that rate, the machine in question could have paid for itself and the engine that ran it in two weeks.

Packing House and Cold Storage Plant in New Jersey

Another point in favor of the machine is the better quality of work turned out. No doubt an expert hand sorter can do just as accurate and perhaps more careful work than the machine; but as a rule hand sorting must be done by ordinary labor, for lack of the other kind. Often it is done by foreign labor. Invariably such help will let down on its work, and wrong-sized and soft peaches will get to the packers in increasing numbers, hurting the quality of the packing and slowing down the work. As soon as a sorter begins to talk and joke with his neighbor, he begins to throw the peaches into the tray instead of laying them in carefully, so they are bound to be bruised. A good machine grader, if rightly handled, will not bruise peaches in the proper stage of ripeness.

The illustrations show two kinds of peach graders, of the same type, however. The larger machine is a power grader used by Mr. Collins; the other a machine of smaller capacity run by foot power in the packing house of Mr. George Smith, Middlesex County, N. J. Mr. Smith has fifty acres of peaches in bearing, yet this small machine handles the fruit without difficulty. These machines consist pri-



A Power Grader at Work

marily of a table on which the peaches are dumped from the picking baskets, allowing the operator to sort out green, overripe, blemished, or otherwise undesirable fruit. From the table the peaches run by gravity or conveyor to a set of graduated rolls, which revolve in opposite directions outward from the center. These rolls are farther apart at the end of the machine than at the end of the table, so the peaches move along until they reach a point where the rolls are far enough apart to allow them to drop through into the canvas aprons which lead to the trays or baskets that are placed before the packers. Other machines of different types give very good service.

Nailing Up Peach Crates

Two men—one to dump the fruit on the grader and sort, and another to carry the graded fruit to the packing table, can keep six or eight good packers busy. A rush of fruit may make it possible to require another man to help with the trays. There should be about twice as many trays as packers.

To eliminate unnecessary steps, the shed is so arranged that when the fruit is unloaded from the wagons, the sorter has merely to turn around to get it It is likewise but a step to carry the filled trays from the machine to the packing table.

Packing the Fruit

The illustration gives a good idea of the packing table. The top slants slightly toward the packer, so that the peaches may roll forward. One inch strips divide the top into spaces for the trays, and a strip in front serves to keep them from sliding too far forward. The top rail is to hold the tills and dividers the packers take from the empty crates, and a board underneath holds an extra supply of tills and dividers to replace any damaged ones. The board on which the crates rest while being packed slants slightly forward. It is at the right distance from the floor to bring the top of the crate on a level with the surface of the table.

Immediately in back of the packers stands a low bench on which the full crates are placed. Under the table, between each pair of packers, is a basket for fruit too soft to pack, which may appear in the trays. A good lively boy should keep a supply of empty crates under the bench and at the ends of the table for the packers, replace the filled baskets of soft fruit with empty ones, and be generally useful. The packers are experts and should do nothing but pack peaches. If they must hunt their own empty crates, get missing tills, empty out the soft fruit, etc., they lose time that is too valuable to waste.

The packer reaches under the bench for an empty crate, containing six empty tills and the divider and places it on the shelf in front of him. He then removes the top three tills and divider, packs the bottom three, replaces the divider and top three tills (which he puts on the top rail of the table), packs them, and sets the packed crate on the low bench behind him. The illustration shows this clearly. The grower must insist upon an honest pack. The topmost layer should be packed with red sides up, to present a good appearance when the buyer opens the crate. This little point is worth a good deal.

For details concerning the style of pack and other points, the reader is referred to New Jersey Bulletin No. 284, "Packing and Shipping Peaches in Georgia Carriers."

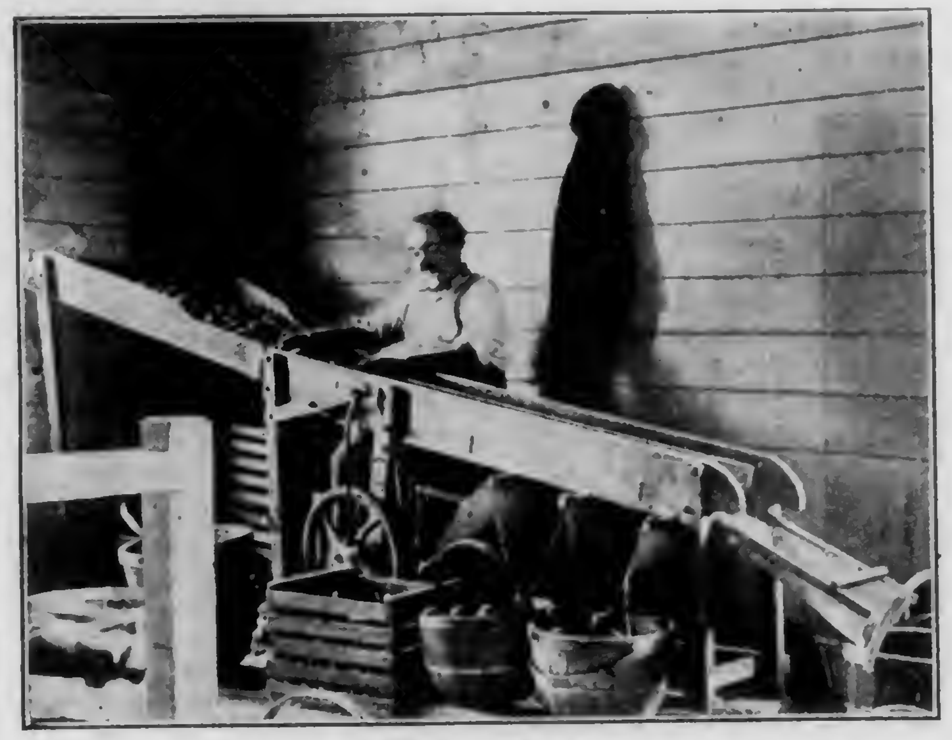
Nailing on Covers

As the peaches are placed on the bench back of the packers, they are examined by an inspector, who insists upon good work. He carries a soft bristle dust brush, with which he wipes the down from the top layer. This causes a remarkable improvement in the appearance of the fruit, especially in a dry season when the fruit is likely to be fuzzy. He also straightens up the top layer if necessary.

The crate press is but a short distance back of the bench. New Jersey Station Circular No. 64, "A Press for the Georgia Carrier," describes its construction. Two men do the nailing. One man gets the packed crate from the bench and places it on the press. The other man puts on the pad and cover and clamps it down with the foot lever. Each man nails up an end and the first man stamps the name of the variety and the grade on the end of the crate. The second man then carries the finished crate up to the pile in back of the press, while the first gets another from the bench. Two good men can nail up pretty fast this way, and one can do all the work if the peaches are coming in slowly.

Shipping

The finished crates are piled in tiers back of the nailing press, keeping each kind and grade separate. This makes it easy to check up the amount of each as they are loaded. They are piled on their sides, four or five crates high.


Foot Power Grader

Most of the growers, except in the extreme southern part of the state, ship by motor truck, usually hired with the crew. This is the best way to handle fruit within trucking distance of New York. When shipping by rail, it is necessary to haul to the car, perhaps to ice it, and load the peaches. At New York the car must be unloaded and the fruit hauled to the wholesaler's. The truck, on the other hand, comes directly to the packing house, and hauls the fruit to the wholesaler's without further handling. The advantage plainly lies with the truck. Besides, the truck is more likely to arrive at the market on time than the railroad car.

Nailing Up Crates

The illustration shows two boys nailing up peach crates. These come knocked down, and must be nailed together before using—a job for the winter or slack times. The material comes by the carload to the big places, but with a good solid bench, a form to hold the ends, and a well-balanced hatchet, it can be nailed up in a hurry. The writer likes to carry his nails in a little wooden box at his waist. The expert Georgia box nailers take their nails from a "stripper," and use a special form to hold the cate. They nail up so fast that you can't believe it until you see it done. After they are made, the crates are packed with tills and divider and decorated with the owner's label, and then stored away until needed.

There is a market in New York for small and low-grade fruit which cannot be profitably packed in carriers. One enterprising grower uses the "Michigan bushel," shown in the illustration, for such stuff. He puts the basket under the first outlet of the grader, through which the little peaches come, and when it is full, shakes it down and puts on the cover. By such economical methods of handling he realizes a profit even on his culls. (Other illustrations on page 10.)

LEVELING HAY RACK OR BOX

In building my last hay rack, which is a combination of a box and rack, I discovered the very best method, I think, for having a rack that is balanced. I leveled the wheels on the lower feloe with a level in a straight edge and then built the rack on th wagon from the bolsters up. By setting the 2 by 8 stringers up and leveling them and using the same level on the crosspieces, there is almost no chance to get a rack that inclines to one side.

This even distribution of weight is something worth while, I have had to borrow racks occasionally of neighbors that had this notion, and it was because one stringer was a little lower than the other. So when the rack was finished, the top inclined to one side a little. With a set of springs under a wagon this trouble is emphasized a good deal, but it is bad without them. Not only is this inconvenient, but it is harder on the rack and on the wagon to have a continuous pull to one side all the time.

I have found the very strongest construction for a rack to be made by cutting a small notch in both the stringer, which is usually made of 2 by 8 stuff, and the cross-piece, which is sometimes 2 by 6. I do not like much notch, but enough to prevent sliding back and forth when it is heavily loaded. A quarter-inch notch in each one is enough.

My rack is made with a cross-piece of 3 by 5 stuff. I like these better, as they do not make the rack so high and they will hold practically as much load. I cannot get used to the idea of a good many farmers about lifting all the stuff I load up a foot or so higher than is necessary. My rack floor is about two inches above the top of the rear tire, and that is enough. I can slip an inch piece under the rack if mud picks up on the hind wheels, but that is not often.—Earl Rogers.

Manure spreaders are economical in price compared with prices of farm products. In fact, the economy in buying a spreader is greater now than ever because of the greater profit in farming, the increased value of manure and the imperative need of our depleted soils. To sell manure spreaders offers a great opportunity for useful as well as profitable service to farm machinery dealers. No machine with the possible exception of the farm tractor will do more to profitably increase farm production during the next five years.

Nailing Covers in New Jersey Crate Press

What I Want In My New Tractor

Some Comparisons and Experiences That Will Guide Me in Selection of My Next Machine

By HALVOR A. CAUM

MONTGOMERY CO., PA.

In the early spring of 1918 we, Father and I, decided we must have a tractor. We had long considered the purchase of one, but when the time came to buy we could hardly decide which make to buy. However, we finally decided the question, or rather the agent did, and we placed the order, delivery to be made by a certain date. The machine not having arrived at the date agreed upon and no evidence of its early arrival, as the carload of which it was a part had been lost in transit, we canceled the order.

And we were up against it—over a thousand dollars to spend and no one to take it! We could not get a machine of any make in all Philadelphia. The different agencies had orders in transit, but none on hand for immediate delivery. Everything was tied up on account of the railroad congestion. Finally one company located a machine in Allentown ready for immediate delivery. We could not trust delivery by freight, so had it brought down by truck.

The day after its arrival a mechanic was sent here to get it running and initiate one of us into the mystic order of tractioneers. He was all the forenoon and half the afternoon getting it adjusted and in proper running order, and after running it out to the field and plowing a few furrows he had me take it around two times, and then left for town. At last I was a member (first degree) of the aforementioned order. Since then I have taken several more degrees. Some day I hope to be a past master.

Adapted to Harrowing and Cultivating

The tractor we bought was really about our fourth choice, but now I am glad we did not get the first machine ordered. Neither would I buy one of the same type as our present, altho in the main it has been fairly satisfactory and is good for a lot of hard work yet. However, the company that built our tractor is now building a much better one, and possibly by the time we are ready to buy again they may have a machine that will meet our requirements.

The tractor has been quite an education to me. By actual experience I have come to know and understand many of the ins and outs of motor, carburetor, ignition and transmission. I can take the motor down and remove the carbon, regrind the valves, scrape and fit a set of bearings. But there is a lot to learn yet. Really, I despair of ever taking the past master degree.

There is a feeling of exaltation and satisfaction in sitting on the seat of a tractor and watching, as you move across the field, three wide true furrows turning over in your wake, that cannot be described; it must be experienced. And to strike a piece of plowing where it is necessary to remove one of the plows goes decidedly against the grain with me, and that brings up one of the first requirements of my next tractor—power.

Our present tractor is rated as 12-24 horsepower, and judging by it, our next tractor must deliver 15 horsepower at the drawbar. That would mean about 30 horsepower at the belt. I will want a tractor that will pull three 14-inch plows under all practical conditions. However, I believe a real 12-24 will do this.

There must be three speeds forward, or more. Our present tractor is a one-speed machine, and I have found it a decided handicap. At times I have had to take off one plow on account of hard plowing conditions in a very small area of the field, while if I could have shifted into "low" I could have pulled thru with the three plows.

The motor on my next tractor will be of the four-cylinder, heavy-duty type. It must have magneto ignition, kerosene burning, force-feed lubrication, and be readily accessible for inspection and repairs. Frequent inspection cuts repair costs. It will be of the four-wheel type and self-steering from the furrow. In our locality it requires much of the operator's attention on the plows, and life is too short for me to try to steer the tractor and watch the plows at one and the same time.

Then, the steering mechanism must be of the type now found on many good tractors—that is, of the automobile type, with "gas" and spark controls on the steering post. Also, I would like a kerosene tank of twenty gallons capacity, enough for a good day's run. All gears must be enclosed with dustproof casings. This is very important.

The comfort and convenience of the operator must be considered. And there should be a comfortable seat with good spring to it. All levers and controls must be as conveniently located as it is possible to place them. A self-starter would be a great convenience and also a time, labor and fuel saver. My next tractor should weigh around 4,500 to 5,000 pounds and should, at the present time, sell for somewhere in the neighborhood of $1,500, f. o. b.

Last, but not the least in importance, this tractor must be sponsored by a responsible company of the highest integrity and which maintains a service station within a reasonable distance and carries a complete line of parts.

Several tractors, conforming in the main with these requirements, are now on the market, but it seems to me that the eastern market for moderate sized tractors is very much neglected by some of our foremost tractor manufacturers. If you, Mr. Farmer, are contemplating the buying of a tractor, consider well what you will require of it and then be sure that the machine you select will be able to fulfill your expectations. Don't be led into buying a machine, possibly otherwise O. K., that will not meet your conditions.

Be sure that there will be ample power for your work; that it will readily respond to the steering wheel under practically all conditions; that all parts of the machine are quickly and easily accessible, from the lugs on the wheels to the motor and transmission; and that the company that manufactures it is not a fly-by-night concern that, with its agents, will have no further interest in the machine after it is on your hands.

If you attended one of the big demonstrations this year at Harrisburg, or Butler, it paid you big dividends to do so.

After you and I have secured our machines we must groom and house them as we would a fine team of horses. I spend at least an hour a day every working day tending to the lubrication, tightening nuts and going over the machine in general. Occasionally a whole day, o[illegible]e, is spent upon it, and it pays. Many [illegible]nually lose money by not taking time to give their machinery careful inspection and making adjustments and repairs as soon as they are needed. It does not pay to wait for a breakdown to learn that something is wrong.

This Tractor Relieves 3 to 4 Horses in Heavy Work

Storing Potatoes

Potatoes properly stored should not sustain a loss thruout the winter season of more than 5 per cent, and under exceptionally good conditions not more than 3 or 4 percent, according to specialists of the United States Department of Agriculture. The maximum return from the crop after it is produced depends on the care with which the potatoes are harvested, stored, graded, sacked, and the ability of the grower to sell at the most advantageous time. Approximately one-third of the main potato crop is marketed at harvest time, and the remainder is stored as a reserve supply for winter and spring. It is physically impossible, as well as economically undesirable, to attempt to market the entire crop in the autumn, and the only way in which potatoes can be handled successfully, so as to insure a uniform supply, is to provide sufficient storage on the farm or at the shipping station for 65 to 75 percent of the crop.

Various types of storage places are now in use, ranging from pits or cheaply constructed dugouts to large, substantially built storage houses.

For successful storage, the tubers must be protected from extremes of cold and heat; a temperature of from 35 to 40 degrees (F.) is considered satisfactory. Sufficient ventilation must be provided to remove foul air and excessive moisture. The storage house must be so constructed as to make it possible to exclude the light, as the table quality of potatoes quickly deteriorates in the light.

The tubers should be dry and reasonably free from dirt when put into storage, an excess of moisture or soil increases the amount of heat in newly stored potatoes. The soil tends to fill up the spaces between the tubers, thus cutting off air circulation, and helping to retain heat that would otherwise escape. All diseased, badly cut, or bruised tubers should be removed from the crop before putting it into cold storage.

It is a common practice for commercial growers and shippers to store potatoes in bins to a depth of 10 to 15 feet. This is almost certain to entail a much heavier shrinkage loss than when stored to a depth of not more than 6 feet. The heavier shrinkage is the result of the greater amount of heat generated by a large pile of potatoes, which results in a higher amount of moisture loss as well as a heavier loss from decay, as heat and moisture both help to develop organisms causing tuber rots. Frequently the losses sustained when the potatoes are stored under these conditions reach 25 percent, and where rigid care has not been exercised to remove all diseased tubers before storing the crop, the loss is even greater. It is advisable, therefore, to pile the potatoes not greater than 5 or 6 feet deep, and the floor dimensions of the bin should not be greater than 12 by 12 feet, provided with a series of ventilating shafts or division walls for the escape of moisture and heat.

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PHILADELPHIA, PA., AUGUST 23, 1919.
VOLUME 46 NUMBER 8

Our job is to serve our readers. Whenever and wherever we can help you, write us.—The Editors.

Be Sure of Your Seed Wheat

OWING to the unusual prevalence of smut, rust, black stalk, and the fact that much wheat was injured by rain, it is certain that a large part of the 1919 crop is not fit for seed. It has been estimated that only about one-third will pass as No. 1 and make first class flour. Farmers should make sure that the seed they sow has good, strong germination qualities and that it will produce a good stand. It will pay to test it the same as seed corn is tested. If it is at all musty, or if it was so damp as to require special efforts to dry it in the bin, it will be safer to purchase seed that is sure to grow. A failure to get a good stand of wheat is a year's failure, and the crop is too important to take unnecessary risks by sowing seed of doubtful quality.

High Cost Hunt

TWO weeks have passed since Congress and numerous government departments started the frantic search for a cure for the high cost of living. The net results to date include volumes of promises and threats, tons of newspaper theory and disconnected but imposing statistics, with still hopeful but increasingly confused public opinion as to causes and possible cures. Many people appeared to be of the opinion that if someone, somewhere, would but wave a magic wand, prices would immediately start a downward trend that would enable them to buy everything they needed at greatly reduced figures and still sell everything they had to offer at the old scale. There has been plenty of waving of arms and ideas, but sane, logical solutions appear as obscure as ever. In the end we are likely to find that high prices of all commodities are one of the costs of four years of war conditions, and present charges are one of the several ways in which we must pay for that war. Sensible economy and gradual readjustment is a more certain tho less spectacular road to old levels than frenzied and ill-advised legislation.

Tractor Demonstrations

THE state tractor demonstration held at Harrisburg last week was undoubtedly the most satisfactory demonstration of the kind ever held in this state. The number of entries were not quite so large as had been hoped, but they included practically all of the machines being sold in the state. The crowd was not over-large, but those in attendance came to see the tractors in operation and kept the operators busy explaining and demonstrating the working parts of their machines. The rain of the second day prevented completion of the program, but the first day's work showed the tractors in plowing, harrowing and compacting the eighty-acre field. The most important feature was the manner in which the farmers inspected the machines in operation. The early demonstrations did little more than prove that tractors will work. These later demonstrations have got to show how they do their work, how the tractors are built, adaptability of the tractors to the various forms of work on the average farms and their likelihood of standing up for a period of years under the exacting requirements of farm work. The modern tractor demonstration is an educational affair, and not a mere show. The state demonstrations this year were well planned to make the educational features most valuable.

Farm Land Values

THE Journal of Commerce, New York, which, as its name implies, is published in the interest of the commercial trade, contains an editorial in a recent issue which argues that farmers have "reaped the largest part of the benefit of the abnormal commercial condition created by the war." It rehashes the old story about farmers getting two to three times as much for their wheat as they were in the custom of getting, and speaks of the reports of banks bursting with the deposits of farmers. The screed winds up by saying that ways will be found to curb the middlemen if farmers will make a substantial reduction in their prices.

We are at a loss to know how the Journal of Commerce gained its popularity as a reliable authority in trade and commercial lines unless its knowledge of these subjects is greater than it displays in relation to agriculture. No one knows better than its editors should that farmers do not set prices on anything they produce, with the possible exception of milk in some localities.

As proof of the alleged farmer prosperity the journal quotes figures of the estimated increase in price of farm lands during the past three years. From the Federal Department of Agriculture it cites that "the average grade of plow lands is worth about $74.31 as against $58.39 three years ago." Increased value per acre in different states are given as follows: Rhode Island, $13; New York, $7; New Jersey, $11; Pennsylvania, $10; North Carolina, $19; Ohio, $16; Illinois, $29, etc. We question the truth of these figures as representing prices paid by genuine farmers for practical farms. There is little doubt that the majority of farm sales in the past three years have been made to city men and other inexperienced buyers who have been led astray by the misleading statements about the profits of farming which have appeared in almost every city paper during the past few years. Most sales of farms have been made in the vicinity of cities by farm owners who could no longer operate them profitably, or who thought it wise to unload on misguided enthusiasts. Many small farms of a few acres within easy distance of cities have also been sold as homes for commuters. These bring a higher acre value, but we do not believe that farms in general have been selling at these advances because real farmers have so increased the demand.

Ohio Dairymen Indicted

LAST week the seven officers of the Northern Ohio Milk Producers' Association were arrested on the charge of violation of the antitrust laws. This producers' association is organized and operated much the same as the Interstate Association in the Pennsylvania field, the Dairymen's League in the New York field, and the local associations of the Chicago, Baltimore and other city districts. The federal antitrust laws have been construed to exempt labor and farm organizations. State laws vary, and the Ohio dairymen are the latest victims of efforts to enforce state laws against organizations of dairymen. The Dairymen's League officers were indicted and acquitted. The Southern California association was brought into court and acquitted. The Chicago association is now awaiting trial. There has never been a conviction of the officers of one of these associations, and the continued prosecutions are beginning to take on the appearance of persecution or efforts to frighten the farmers into abandonment of organized selling. The Ohio case is merely another evidence of the need of enactment of the pending amendment to the Clayton antitrust law, to make plain the application of the law to farmers' organizations.

The method of conducting the case against the Ohio dairymen was typical of methods used in all of these cases. When bills of indictment were announced the president of the association notified the sheriff that all the officers would voluntarily present themselves the following morning. He was told that this would be satisfactory, but during the night the sheriff with a number of deputies went out and arrested each man at his home and brought them in to the county jail. These farmer officers were forced to remain in jail until the following forenoon, and were treated in every possible way as dangerous criminals. Two motives can be assigned for such proceedings: The officers made a brave effort to satisfy the popular clamor for "something" to help cut the high cost of living. Second, the farmers are supposed to be mere mossbacks who can be frightened by spectacular arrests in the dead of the night. Perhaps the city people will be satisfied that the officials are performing timely, meritorious duty, but if they expect that the methods used will intimidate the farmers in legitimate organization efforts, they do not know the present temper of farm people.

Which?

THAT this country as a whole is not militaristic was shown by its reluctance to go into war and again by the mighty shout of relief that went up at the news of the signing of the armistice. Returning soldiers instead of being converted to militarism are almost unanimous against any extensive plans in that direction. The attack made upon the Chamberlain-Kahn conscription bill by the National Guard Association at a meeting held in the regiment armory in New York recently was an eye-opener to the Congressional Committee on Military Affairs. Resolutions adopted contain the following:

> "The American people will not tolerate the ruthless abandonment of a policy which created the great civil army which answered the call, never flinched in the face of the severest fire, and whose record of achievement stands as a guarantee of its ability to handle any situation which may confront it." . . .
>
> "The Chamberlain-Kahn bill is the swan song of the General Staff. Utterly failing in its efforts to secure necessary recruits for the regular army it now attempts in time of peace under the guise of a universal service bill to resort to conscription, and to seize from their homes the youth of America for service in the regular army. . . . Therefore the National Guard opposes the passage of the Chamberlain-Kahn bill."

One of the most unAmerican arguments favoring this or other military preparation bills is found in a statement put out the other day by the American Defense Society. The statement of the chairman is based upon the propositions put forth lately by the railroad men in favor of government ownership. The chairman of the Defense Society says that "this is the beginning of revolution in America." He continues:

> "We believe that the fateful hour is about to strike, and if this be an alarmist view, then let our critics make the most of it. You must no longer deceive yourselves by fatuous optimism. The clash of arms is coming, and the sooner it begins the quicker it will be over. We warn you to be prepared." . . .

It is claimed that the inside knowledge which the society has concerning radical movements is such that it is warranted in sending out this express warning.

It is a satisfaction to note that this jingo class is so ignorant of the true American temper and principle as to speak out so bluntly and thus give away the true purpose of the clique behind bills such as the Chamberlain-Kahn bill. They seem to forget that this is a democratic republic which guarantees the inalienable rights of life, liberty and the pursuit of happiness, and that it is not given into the hands of any one class the right to limit free speech or to enforce any set of political or economic ideas. The nation already possesses the law and the police force to suppress lawlessness and violence, and it is a misconception of our ideals for anyone to propose the establishment of a military power to bolster up any kind of an autocracy in America. We just got thru cleaning up that kind of thing in Europe.

NEW YORK LETTER

Fruit Notes.—Apples in the Hudson Valley are twice as good as in Western New York. They are now bringing $4.25 a barrel with no barrel or labor cost included. Growers expect $8 a barrel this year for winter apples. Small fruits are replacing apples and peaches somewhat as being more certain to bear and also more profitable. The Sodus berry section brought its growers over $500,000 this season. Canneries had to make good on all "plus raise" contract clauses this year, as fruit of all sorts is and will be high. Peaches have been given every care, with expensive dusting instead of spraying, and will be high in price but excellent in quality. The fruit exhibit at the State Fair is being looked after most thoroly, but will not be up to its usual quality. This is because of a cut in the appropriation for this purpose and because of poorer fruit to select from in general. Over 100 growers have been canvassed and will contribute towards it.

Big Tractor Show at State Fair.—Eighty acres, a new tract bought by the Fair Commission, will be filled with farm exhibits at the coming fair, and 35 types of tractors will be shown. This is the tenth anniversary of the advent of tractors, the first demonstration being given in Winnipeg in 1909 by six companies.

Lumber Prices to Remain High.—The lumber market in this state is becoming stabilized, but prices have gone up considerably this month, and reports from southern and western dealers indicate that they will remain high. Increases of $5 and $10 were made in oak prices. There are advances in nearly all items in the east. There is an appreciable slacking in the demand for lumber here. As a sample of how this affects farmers, it is said that the owner of a farm in Madison County, where the barn had been burned, called for bids from contractors to put up a 36 by 80 foot barn. The lowest bid received to fill specifications of an ordinary modern barn, including labor and other expenses, was $7,000, considerably more than the farm could be sold for when the barn should be completed, together with the other buildings. From now on it would seem highly necessary that all buildings receive the best of care as to paint, roofing, foundations and insurance.

Gasoline Mowing Machine Perfected.—A Syracuse inventor has tried out successfully a new gas power mower. It mowed ten acres of hay on one gallon of gasoline. Farmers are interested to know that its work in cutting peas is much better than the ordinary mower, as it throws the vines out of the path of the knives. The mower is small—not much larger than a motorcycle—has three wheels and two cylinders. It will soon be placed on the market.

Cheese Market Slumps.—The agitation of living costs has caused a drop in the cheese market of two cents, and a further decline is feared. Gouverneur and Watertown dairy boards failed to fix a price this week, and Plymouth and Salamanca boards got but 29 cents. A year ago the price was 24¼ cents. Buyers and salesmen were at odds in their conferences this week and finally abandoned all efforts to agree on prices.

Constructive Wool Legislation.—The Tompkins County Sheep Growers' Association will call for the adoption of a resolution at the annual meeting of the State Federation of Sheep Growers' Association, to be held at Cooperstown this week, calling for the enactment of legislation requiring all manufacturers or dealers in woolen fabrics to have displayed on each fabric or garment offered for sale a statement showing the actual percentage of virgin wool in it. It is a common practice now to mix with virgin wool cotton, shoddy or reworked wool, and to place such fabrics on the market as all-wool fabrics, to the great detriment of the consuming public as well as to the wool growers of the country. The resolution will ask that failure to so mark garments and fabrics shall subject the violator of the law to fine or imprisonment, or both.

Army Worm Rampant.—After five years' comparative freedom from the ravages of the army worm, Cayuga County farmers are now confronted with this destroyer of plant life. Grain fields of Ledyard, Venice, Springport and Scipio are already being destroyed, as well as cornfields. Farmers are plowing furrows about fields to protect them, as the worms find it difficult to climb up the steep sides. Holes are dug at intervals in the furrows and oil or poison poured in on the worms that gather. Promptness in these preventive methods is necessary.

Cars to Relieve Grain Congestion.—The New York Central Railroad has been rushing cars to Northwestern Ohio this week to relieve the congestion of grain elevators in the section around Toledo. Over 2,000,000 bushels of wheat were tied up there within a radius of 100 miles. Julius E. Barnes, U. S. wheat director reports that the U. S. Grain Corporation proposed to fix a price of $10 a barrel for flour, and to restrict wholesalers and jobbers from adding over 75 cents above this price, retailers limited to $1.25 profit. Wheat seems to be a poor yield so far in most of the State, averaging 18 to 25 bushels per acre. One Cortland farmer just harvested 456 bushels from 14 acres, or 33 bushels to the acre. The crop was secured in 2½ days and threshed in half a day.

Cattle For France.—T. H. Holland, who has the contract to select cattle for France from most of this state, says that Cortland County Holsteins run the best in the state; 90 percent of those offered by dealers being accepted by the inspectors. The county has already sent 1,000 head and 3,000 more will be taken from the section. Heifers and young cows of grade stock are wanted and they must be large, and in good physical condition. Two French inspectors examine the animals as they pass thru the inspection pens at the rate of 200 a day. Then American veterinarians examine those passed for physical defects, and give the tuberculin test. They are then shipped at once to Goshen, thence to France. Buyers are also busy in Tully, Watertown, Waterville, Oneida and other sections selecting the choicest stock. Mature cows must weigh 1,100 pounds and those two to three years old, 800 pounds; three to four years old, 900 pounds.

State Limit Food Profits.—After much agitation of the high cost of living, and criticism because he had failed to prosecute retail milk profiteers Governor Smith has appointed Dr. John H. Finley, state commissioner of education, and former Governor Glynn to investigate living costs and suggest remedies. The Moreland act vests the Governor with power to appoint investigators with authority to inquire into the activities of any state department, commission or bureau. This committee may investigate the state council of farms and markets, and order this department to proceed against profiteers. This council is empowered to fix the margin of profit to dealers in funds to enforce the provision. The Governor will provide a special Grand Jury in connection with prosecutions.

NEW JERSEY NEWS

Prices Come Down.—Food prices both in the stores and produce markets in New Jersey are slowly being reduced, according to information received from the federal and state authorities now conducting a campaign against profiteering. Joseph L. Bodine, District Attorney for the District of New Jersey, along with Thomas F. McCran, Attorney General for this state, are in close touch with the situation thru the medium of agents located in all parts of the Commonwealth, and they are ready to prosecute to the fullest extent of the federal and state laws governing the hoarding and raising of the cost of necessities of life. Mr. Bodine is receiving daily reports on the situation thruout the state, and any violations will be considered at a special session of the Federal Grand Jury at Newark during the next week or so. Stocks in the produce markets were very good during the week, the reports stated, while fruits and vegetables were more plentiful. Jersey sweet corn, tomatoes, lima beans, cucumbers, radishes, lettuce, carrots, beets, cabbage and green and white beans were sold at reasonable prices.

Soldiers Instructed in Farming.—Several hundred soldiers from overseas, who were among the injured in the American Expeditionary Forces, are being taught farm work while being treated at the United States Army Convalescent Hospital a few miles north of Trenton. The men who are in fit condition to take to the fields and the orchards are given several hours' training daily by instructors. From what some of the soldiers say, they will take up agricultural pursuits as soon as they are released from the institution.

Crops Injured by Heavy Gale.—Enormous damage to fruit and other farm crops resulted in Burlington and Mercer Counties from the heavy gale which swept the Atlantic seaboard during the week. Orchardists making a close estimate of the damage done say that not only have thousands of bushels of green apples and peaches been knocked from the trees, but that under a load of heavy fruit and wet foliage many branches were twisted from the trees. Hundreds of acres of corn were also flattened by the high winds. Because of much rain within a recent period this vegetable had made a quick succulent growth, and stalks in many sections of the two counties, measuring fifteen feet in length and weighted by the rain, fell easy prey to the gale.

Housewives Aided at Market.—Savings of 50 percent in prices were made during the week by the thrifty housewives in Burlington city thru the selling of all kinds of fruit and vegetables by the farmers at the market there at prices that were the same to the women as to the produce merchants. It was a custom for years for the truckers to come to the market and there sell in large quantities to hucksters, who would go about the streets and sell, at very much increased prices, small quantities of produce. While extensive commission houses from Philadelphia and New York were purchasing all kinds of fruits and vegetables from the farmers and shipping them to the larger cities in motor trucks, they were elbowed by the housewives with their baskets filled to the brim with products purchased at the same prices as that paid by the agents. It is said that this method is appreciably decreasing the high cost of living in Burlington.

To Raise and Sell.—A new phase of farm activities in this state for the raising and selling of produce was developed during the week, when two concerns were chartered in the office of the Secretary of State to operate farms for the growing of produce, etc., and the selling of the same.

Demand for Farm Tractors.—There has been such a demand for farm tractors and other kinds of motor-operated machinery from farmers all over the state during the past month or so, a new firm was chartered this week to sell those and other kinds of farm implements. The liberal use of tractors by the agriculturists in some sections of South Jersey from the beginning of the season has awakened a great interest and farmers are purchasing them in large numbers.

Farmers Charter a Co-operative Association.—A charter has been issued by the Secretary of State to the South Jersey Farmers' Co-operative Federation, which will be located in the Red Men's Building, at Minatola, for the purpose of buying and selling in a co-operative manner all things for the farm and home, to centralize all farmers' organizations in South Jersey, and to deal in agricultural products.—Kelly.

FARM MEETING CALENDAR

Williams Grove Picnic, Williams Grove, Pa., August 25-29.

Vegetable Growers' Convention, Detroit, Mich., September 9-13.

New York State Fair, Syracuse, N. Y., September 8-13.

National Board of Farm Organizations Meeting, Washington, D. C., September 16-17.

Interstate Fair, Trenton, N. J., September 29-October 3.

National Dairy Show, Chicago, Ill., October 6-12.

National Grange Meeting, Grand Rapids, Mich. November 12-21.

New Jersey Horticultural Society Meeting, Atlantic City, December 1-3.

Peninsula Horticultural Society Meeting, Chestertown, Md., January 6-8.

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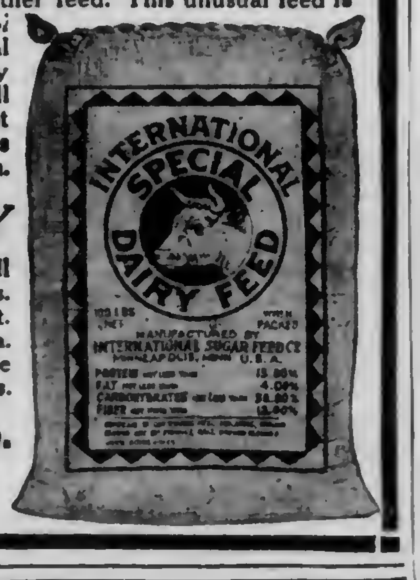
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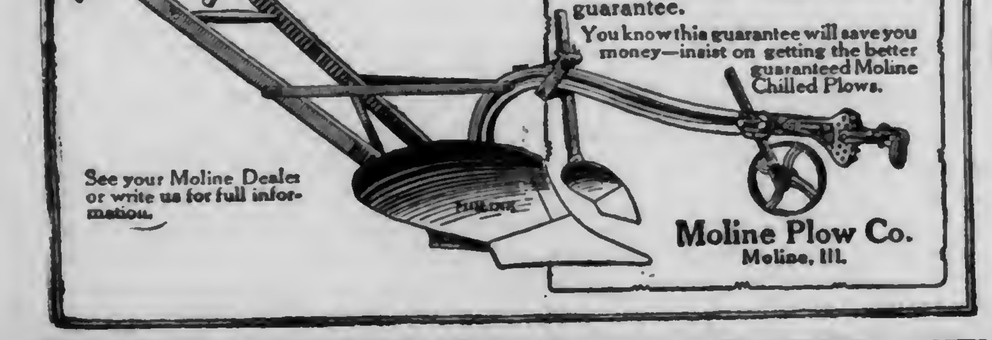

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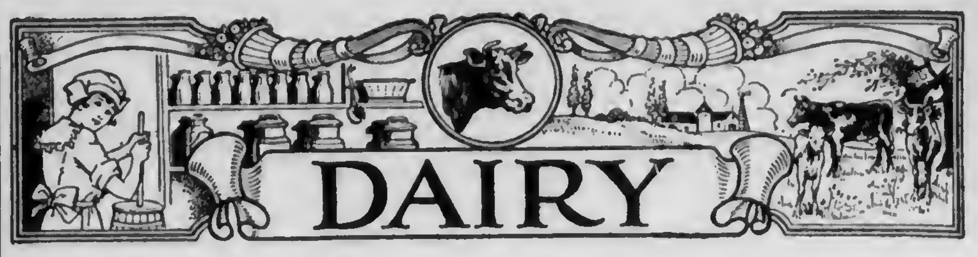


DAIRY

SETTING UP THE SILAGE CUTTER

Selection of Cutter

When you buy a new silage cutter, the size should be selected according to the power available. One thing should be borne in mind, that a cutter of a reasonable size, one that does not require splitting of the bundles, is much easier to feed than a smaller machine. Wherever possible, it is a good plan to own your own machine, so you can fill your silo at just the right time, can take the job more slowly which will result in your getting more into the silo and getting it in better shape.

Belt Arrangement

Perhaps no one point in the handling of the cutter is more important than the pulley size. This is a point that must be looked after in each particular case, as there is no standard of belt travel among the tractor manufacturers and the result is that a pulley which might be right for one tractor would be entirely wrong for use in connection with another.

As an illustration, suppose you were to buy a cutter that was just the right size for your tractor, but the speed of your tractor belt pulley were such as to drive the cutter too fast. If you were to set up the machine and try to operate it in this way, you would find that owing to the increased capacity resulting from the excessive speed of the cutter the tractor did not have sufficient power. This would force the speed of the tractor down, slow down the entire outfit and your blower would clog.

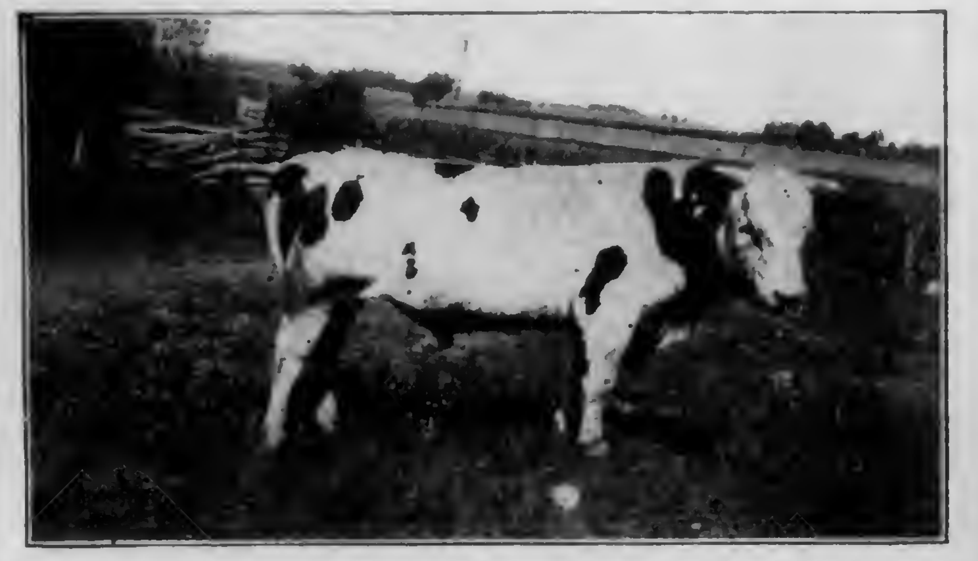
The rule for determining the required size of the cutter pulley is to multiply the number of revolutions of the tractor crank shaft by the number of inches in diameter of the drive pulley on the tractor; and that number of inches in diameter of the drive pulley on the tractor; and that number divided by the number of revolutions that the silage cutter is to be driven. The result would be the diameter of the pulley required on the silo filler at the point where it takes the power from the tractor.

Example.—Let us suppose the speed of engine to be 250 rounds per minute and the diameter of engine pulley to be 36 inches. Multiply 250 by 36 we have 9000. Suppose the required speed of the silage cutter is 600. Dividing the 9000 by 600, we have 15, as the number of inches of diameter of pulley on filler where it takes the power from the tractor.

Long belts are better than short ones wherever possible, as the additional weight of the belt prevents slipping. However, where the power is light, a short belt is better, as it takes more or less extra power to handle a long belt.

Starting the Machine

Try to set the machine as nearly level as possible and as close to the silo as possible, so that the blower pipe can be set perpendicularly. If the pipe is set on a slant, the cut feed has a tendency to settle on the lower side with a result that it takes more power to elevate. Before starting the machine, go over it carefully and see that all bearings are well oiled, see that all bolts are tight, especially the bolts holding the cutter bar and knives. Look over the knife adjustment to see that the knives just barely touch the cutter bar steel, as they pass them, start up the cutter and let it run idle for a few minutes. After this, stop it again, then start it up and feed it very slowly at first, until you are sure that the machine is all right.



Herd Sire on Crystal Spring Stock Farm, Adams Co., Pa. Has 43-lb. Sire and Dam Made 33 Lbs. Butterfat in 7 Days as Junior 3-Year-Old

CHANGE IN TUBERCULOSIS TESTING POLICY

Dr. C. J. Marshall, State Veterinarian, announces a change in policy of tuberculin testing in this state. He says:

A large number of our leading breeders and dairymen have adopted the officially accredited plan for the eradication of tuberculosis in preference to the old plan of applying the test under state alone supervision. The fact that the officially accredited plan contains advantages to the herd owner as compared to the old method, it has been deemed advisable to discontinue the testing of herds under what has been known as plan two and to continue the work of eradication under the following methods:

First—Officially Accredited Herd Plan (Form 229).—Co-operatively between Federal and State Bureaus to establish thruout the United States what is known as Officially Accredited Tuberculosis Free Herds. To secure this co-operative assistance, the herd owner must comply with the requirements stated in the enclosed form 229. The examination and tests are conducted at stated intervals by Federal and State Bureau agents free of charge. The owner is partially paid for condemned cattle by payments from Federal and State Bureau funds as available by legislative appropriations. In some instances payments are deferred until moneys are available; but there has been no default of payment. Condemned cattle are appraised at market value as agreed between owner and agent. The law limits the payment of indemnity by the state to $70 for a registered and $40 for an unregistered animal. In addition to the amount paid by the state, the Federal Bureau may pay not more than $50 for a registered and 25 for an unregistered animal. The law limits the amount the owner may receive from all sources, i. e., the state, the federal government and the butcher, to 90 percent of the market value as established by the owner and agent.

Second—Unofficial Plan. — The owner may arrange for the testing of one or more animals, or the entire herd, but no indemnity will be paid and the owner is under no obligation to continue the testing. Examinations and tuberculin tests are conducted, at owner's expense, by a veterinarian selected by the owner, provided such veterinarian has been approved by the State Bureau. All tests must be reported promptly and the condemned animals handled according to law. This plan is to take care of herd owners who are unable or unwilling to obligate themselves under any prescribed plan in the effort to rid their herds of tuberculosis.

It is also the intention of State Bureau to continue the testing and paying indemnity so long as funds are available, under the old plan two (Form 226) of such herds as are now signed up under that plan. No additional herds, however, will be taken on under old plan two.

HANDLING SHREDDED FODDER

Have you discovered that shredded corn fodder can only be handled easily with a two pronged fork. I have tried out every kind of fork on the place and find that the fodder will stick or catch in the prongs of all four-pronged forks and hooks and that a shaking fork cannot be stuck into a pile of shredded fodder. Three-pronged forks are the same. I have thrown all my fodder down from the mow and barn floor into the feeding entry with a small two-pronged grain fork and did not have to spend two-thirds of the time in cleaning the fodder from the prongs as formerly

However the usefulness of this fork in handling fodder ends here. It cannot be used in feeding it. A shaking fork or manure fork is the thing. It does lodge in the latter fork here, too, but the fork is drawn along the edge of the rack or trough and is cleaned each time. The small fork is best to loosen and push, not to carry, the fodder.—R. I. W., Lebanon Co., Pa.

The rush of cropping work should not be made an excuse for neglecting the calves. All young animals worth raising should be fed well from the start.

—

The farmer who needs help can render valuable aid to the nation by doing his best to give work to the returning soldier.

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Heats Every Room From One Register

ONE heater; one pipe; one register; will heat two floors of the average sized house, with an economy and comfort satisfaction that will open your eyes.

When you find out what it will actually do, and the little coal it actually does it on; you will say "it sounds too good to be good."

But we can prove it. Send for booklet. We'll send name of agent in your town. If there isn't one, we'll see to it there is.

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Dealers Everywhere

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Unless you maintain the air in your tires to the right pressure you cannot expect them to last.

Tires with not enough air in them not only wear out before their time, but they cause a tremendous waste of gasoline.

Cut down on your tire and gasoline bill by measuring the air in your tires with a

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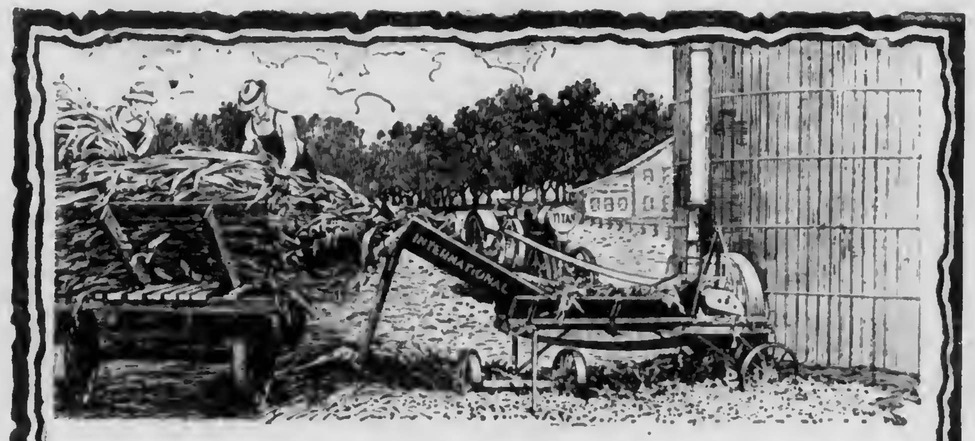

Fill Your Silo Yourself

LIKE all progressive farmers you are sold on the proposition that a silo full of choice ensilage pays handsomely. The less it costs the better it pays. May we talk with you for a minute about the easiest and cheapest way of filling your silo?

Silo filling cost depends upon three things — the cutter's capacity for work, the cost of power and the length of time the cutter lasts. A cutter with capacity keeps your men and horses busy — that is one saving. An International ensilage cutter, using little power, feeds easily, does not choke and elevates the silage in a steady stream into the highest silo. With ordinary care you can use an International more seasons than you will believe.

There are five sizes, all of the knife and blower on flywheel type, one of which will do your work at little cost. Every International cutter can be depended upon for satisfactory work — every one is backed by a service that keeps it going throughout the filling season. To be sure of economy and satisfaction in your silo filling this year get in touch with a nearby International dealer or write us for catalogues.

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International Harvester Company of America, Inc.
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Experienced Men Wanted

We have openings for both experienced tree pruners and also good climbers who may wish to learn. Can use one or two who have had experience in fruit trees.

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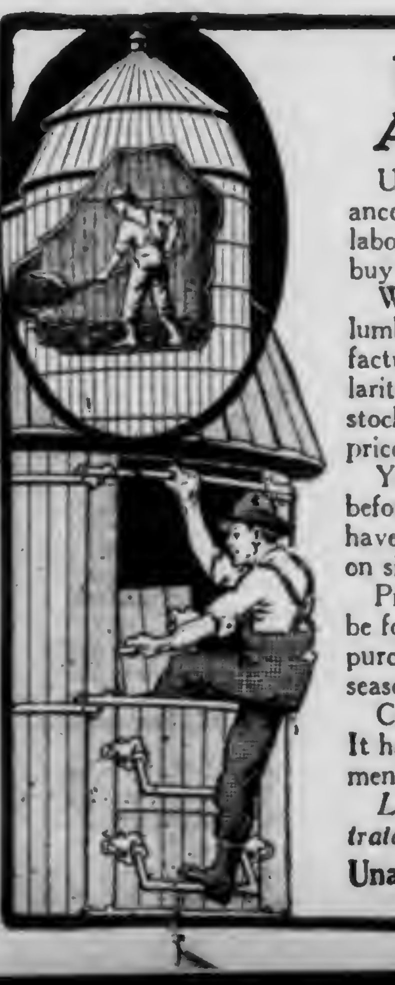

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Unadilla silos have not advanced in accordance with increases in prices of lumber and labor. The Unadilla today is even a better buy than it ever was.

We offer the benefit of our big purchases of lumber and materials, and economy in manufacturing a large number of silos. The popularity of Unadilla Silos among dairymen and stockmen makes this economy and these low prices possible.

You can get your Unadilla erected in time, before corn harvest if you act promptly. We have special facilities for late season shipments on silos of any size.

Present prices are not guaranteed. We may be forced to increase. But we *do* guarantee all purchasers against any decline in prices this season.

Choose the Unadilla. It offers you true value. It has been and is, the choice of leading dairymen and stockmen.

Learn why. Send for our big, well illustrated catalog and prices.

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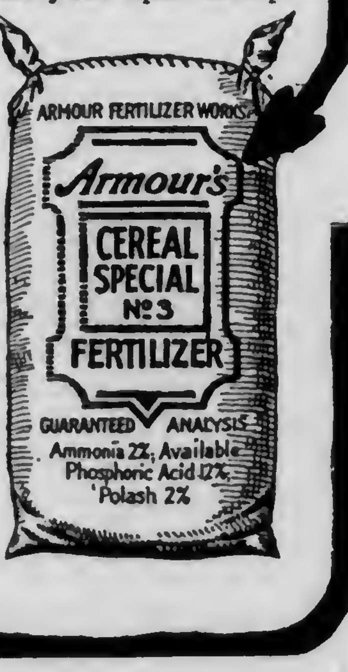

for WHEAT

You can't afford to experiment with a year's wheat crop and you don't have to—this has been done for you.

Everything in the way of practical and scientific data—laboratory, factory and field tests with fertilizers for wheat on all types of soils—has been condensed and boiled down to four special formulas.

Armour's four Cereal Special Fertilizers fill every wheat need and supply the plant food that your soil lacks.

Armour's Cereal Special Fertilizers

supply the right amounts of plant food—from the right materials—quickly available ammonia to start the wheat off in the Fall and give it a good root growth; available phosphoric acid and potash to stiffen the straw, fill out the grain, make it plump and heavy and ripen the crop early. They feed the crop just the plant food it needs, neither too much nor too little.

Eliminate guess work and chance this Fall—benefit by the experience of others. Use Armour's Cereal Special Fertilizers—the right fertilizer for wheat.

Choose the One That Suits Your Soil

On sandy soil—use Armour's Cereal Special Fertilizer No. 1—2-10-6.

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On clay soil—use Armour's Cereal Special Fertilizer No. 3—2-12-2.

If you have a heavy clay soil which you know can supply the necessary potash use Armour's Cereal Special Fertilizer No. 4—2-12-0.

See our local sales agent NOW—tell him to reserve your requirements. Ask him for a copy of our new Wheat Booklet—"Turning Fertilizer Dollars into Wheat Dollars" or write us direct. Don't delay—wheat seeding time will soon be here.

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Let Us Tell You
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Manson Campbell & Sons Company
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A REAL POTATO DIGGER

Not a mere Plow with a rake attachment, but a low priced, scientific Implement. Cleans the trash from the dirt and the dirt from the potatoes as well as machines that cost five times as much. Steel beam with high arch to prevent clogging. Polished high carbon steel shovel. Adjustable wheels regulate depth and "pitch" exactly. Will not bruise potatoes. ¶ Don't buy a Drill, Cultivator, Harrow, Lime Spreader, Potato Digger, or any other piece of Farm Machinery before writing for our special catalog. State what machine you want and give your dealer's name.

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HOFFMAN'S SEED WHEAT

Nine reliable kinds—bearded and beardless. Harvested and in the barns before recent rains—sound—dry—clean—now ready for shipment direct to farmers. Varieties that **yield more per acre—require less seed.** Hardiest and most prolific types known. Produced in the fertile wheat soils of Lancaster County, Pa., where winter wheat does its best. Cleaned to perfection.

Seed is closely graded—clean of **cockle—rye—cheat—garlic—smut—scab**—etc.

Hoffman's Seed Wheat is offered to you at very moderate prices that usually permit changing seed at less cost than $1 per acre. Results from its planting are bound to pay you splendid returns on your investment.

Shown here is head of "Leap's Prolific"—most popular variety—yielding 36 to 42 bu. per acre. Very hardy—reliable—dependable kind to sow. Read about "Leap's Prolific" and our other varieties in

Free Seed Wheat Catalog

Write for Catalog and Seed Samples today—both are free—but you must ask for them. Tell us you saw this ad in the Penna. Farmer.

Seed Wheat must be satisfactory. If you are not pleased with seed—return it—we'll refund your money and pay all freight.

Alfalfa Seed. "Northwest" brand—Idaho grown seed—99.80% pure—highest germination. Hardiest strain of seed you can buy—means successful stands. "Extra" brand—Kansas grown seed—also of high test. Alfalfa Seed Samples and special booklet "How to Grow Alfalfa" free.

Timothy Seed. Hoffman's "Farmer's Choice" brand Timothy Seed is the cleanest and soundest seed you can buy—tests 99½ to 99¾% pure. Germination almost perfect. Samples free. Write us today.

A. H. Hoffman, Inc., Landisville, Lancaster Co., Pa.

Fruit Growing in New York

Inspection Trip of State Horticultural Society Teaches Visitors Valuable Lessons

Interest in commercial fruit culture is steadily growing in New York state. This fact was quite forcefully emphasized by the large number of progressive farmers who participated in the annual summer outing and orchard inspection of the New York State Horticultural Society, August 6 and 7. The route led through the fruit districts of Niagara County, N. Y., and the counties of Welland, Lincoln and Wentworth in Ontario, Canada, west of the Niagara River and along the south shore of Lake Ontario. Sixty-five automobiles, carrying upwards of 250 persons, were in line when the start was made from Medina, Orleans County, and many more joined the party on the second day's trip west of the Niagara River. The first stop was made at the farm of Frank Bradley, of Barker, a former president of the New York State Fruit Growers' Association.

Apple Scab Control

In a Rome orchard on Mr. Bradley's place, L. F. Strickland, a state Department of Agriculture fruit inspector, is conducting some interesting experiments in apple scab control. This orchard is situated in an area near the lake that is subject to fogs and extremely heavy dews, a condition favorable to the development of apple scab.

There were three plots in the orchard. One was unsprayed; another was sprayed in the pre-pink period, and the third was given the pre-pink and pink sprays. The results up to the present time show that two sprays—the pre-pink and pink—are necessary in such localities for Rome, McIntosh, Twenty-ounce and Greenings. The beneficial effects of the spraying were plainly seen. As there was much scab infestation on the underside of the leaves, Mr. Strickland advised spraying from the ground.

A Profitable Fruit Farm

In Mr. Bradley's bearing orchards are 43 acres of apples, 40 of peaches, and 10 of pears. These yield a gross income of at least $20,000 in a good year, one acre of mature trees having a record of $1,600 gross income per acre. These results are obtained by the following methods: As soon as the ground is in condition to work in the spring it is plowed shallow; then it is kept continually pulverized with an orchard harrow that leaves a fine dust mulch on the surface. Late in July a cover crop of clover is sown if the weather is favorable. If seeding is delayed until late in August, rye and vetch are sown. The cover crop is supplemented with liberal dressings of stable manure and sometimes chemical fertilizers. Pruning begins when the leaves are off the trees, and consists in cutting out diseased wood and removing enough of the healthy branches to let the sunshine in to ripen the fruit. The trees are sprayed several times, and thinning is practiced when necessary to secure high-quality fruit.

Co-operative Spraying

The Niagara County co-operative spraying service established two years ago under the management of Farm Bureau Manager N. R. Peet and Mr. Strickland has proved of valuable assistance to the fruit growers of the county.

The diversity in soil types and climate necessitated the dividing of the county into zones, the conditions in each zone being somewhat similar. One orchard of each kind of fruit in each zone is designated as a criterion orchard. The inspection is made in these orchards, and it is understood by the growers that the information sent out by the inspector is based on conditions found in them.

Central Packing House

At Burt, a fruit shipping station on the R., W. and O. division of the New York Central Railroad, the fruit growers visited a central packing house. It was built last summer at a cost of $5,000, including the equipment. There are ten cooperative central packing houses in Niagara County, all selling their fruit under a common label, the Cataract brand. They are operated by associations of growers federated into a central association known as the Niagara District Fruit Growers' Association.

One of the requirements of the Cataract brand is that the apples be packed in quarter-inch sizes so that no apples in a barrel will vary in size more than a quarter of an inch. The apples are packed over a grader, and every barrel is faced with apples of the same size as those in the middle.

"At present," says Manager Peet, of the County Farm Bureau, "apples above two and a half inches in diameter are usually packed in one grade. The large apples make the little ones look small, and the little ones make the large ones look coarse. A restaurant proprietor who desires apples for baking cannot use such fruit because he must treat his customers all alike, to the extent of giving them all the same sized baked apple. If the fruit is to be sold co-operatively and by pooling, quarter-inch sizing is advisable. On the individual farm, however, the quarter-inch sizing of apples is almost impossible unless the grower is a large operator."

Last year seven co-operative central packing houses in Niagara County packed nearly 100,000 barrels of apples, 50,000 bushels of peaches, and a few pears and plums. This fall, with ten packing houses, the county association expects to handle 45,000 barrels of apples, 81,000 bushels of peaches, 530 tons of grapes and 100 tons of plums and prunes. The association now has a membership of 256 fruit growers, having a total property valuation of more than $5,000,000. It has $40,000 invested in packing houses.

Manager Peet says that co-operative packing and selling are closely associated, yet there is a vast difference between central packing and co-operative selling. A central packing house association may be formed to co-operatively grade and pack their fruit without necessarily making co-operative sales. If fruit is graded to a uniform standard he believes the selling end of the proposition will largely take care of itself. The Niagara County co-operative movement has developed strongly as a fruit packing and grading agency, rather than as a co-operative selling organization. As similar associations of packing houses are being formed in several other Western New York counties it is not unreasonable to predict that in time the co-operative selling end will be more largely developed and a considerable part of the fruit in this district will be sold thru a central organization.

Novel Orchard Management

Near Olcott Beach the Mann apple orchard was visited. This orchard is about twenty years old and has never been pruned. The heads were started low and the lower limbs reach the ground. When the writer visited this orchard two years ago it was bearing a large crop of fruit, altho there were few apples to be found in the other orchards in the county Conditions are similar this season. There is a small apple crop in the locality, but this unpruned orchard with its bushy, scraggy trees, is carrying a good crop of fruit. It is claimed that it has not failed to bear a crop of fruit since it was five years old, and it has been profitable to the owners.

The route thru the Canadian fruit belt led down the west side of the Niagara river, to Niagara-on-the-Lake and westward to St. Catherines and Grimsby in the center of one of the finest fruit districts in the Western hemisphere. Officers of the Niagara Penninsula Fruit Growers' Association escorted the American growers during the day and they were accompanied by many Canadian farmers.

Small Farms—Large Returns

The farms in this fruit belt are not large, averaging around thirty acres, but the returns per acre are large under the intensive cultivation they receive. Peaches, plums, cherries, grapes and berries are the principal fruit crops. Quite a number of apple orchards were planted years ago, but the soil is not well suited to the apple, and the apple orchards on some farms are being replaced by small fruits, from which greater profit is to be derived. The peach industry is also on the decline, according to the Canadian growers. The peach growing business is something of a gamble, with the chances on the average not favorable to profits. Pears, plums and berries are more reliable and therefore more profitable.

Acres and acres of vineyards were passed. The vines showed the effects of excellent culture, and were laden with fruit unusually large for this time of year. In reply to the question, what are the Canadian vineyardists going to do with their grapes, with wine making prohibited, an extensive grower near Grimsby said that the crop would be largely shipped to the Canadian Northwest demand for table grapes.

At Vineland, near Grimsby, is located the Vineland Horticultural Experiment station, with 160 acres in fruit. The peach orchards are especially worthy of mention. There are many varieties, and the first earlies were being picked by farmerettes from Toronto University.

In Jordon, near the experiment station, is the small fruit farm of Philip D. Wisnar, from two acres of which 1200 crates of strawberries were sold this season, bringing the owner $10 a crate. Many acres were planted in Cuthbert and Marlboro red raspberries and Kittatinny blackberries. Ten years ago this was an old grain farm. Barnyard manure has been depended upon to maintain a high condition of productiveness. This manure is purchased from Hamilton, St. Catherines and Buffalo. The annual fruit sales aggregate $20,000.—E. E. R.

VALUE OF LIME ON SOIL

has been determined by Practice and Experience as much as by Chemistry.

But Actual Cost of Lime Delivered at the Farm involves the factors of Purity and Labor of Handling and of Spreading.

Warner's "Limoid" is Pure hydrated lime shipped in a convenient and handy package. Its Purity and Ease of Handling increase its real value.

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Feeding the World:—The American farmer's job. To do your utmost the land should be fed too. Stick to the old dependable when it comes to feeding the land—Reading Bone Fertiliser.

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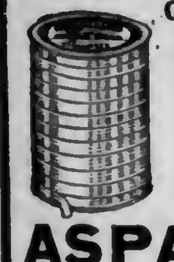

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Corn Harvester

That Beats them all. One horse cuts two rows. Carries to the shock. Worked by 1, 2, or 3 men. No danger. No twine. Free trial. We also make Stump Pullers and Tile Ditchers. Catalog Free. Agents wanted. H. P. BENNETT & CO., Westerville, Ohio

SEED WHEAT

LEAP'S PROLIFIC. Harvested before the rain; clear of cockle and garlic. Price $3.00 per bu.; bags extra. F. O. B. West Chester. JOSEPH H. BRINTON, Homestead Farm, West Chester, Pa.

HARRISONS' NURSERIES

Fruit Trees Budded from Bearing Orchards. Peach, apple, pear, plum, cherry, quince, grape-vines, strawberry plants, raspberries, blackberries, evergreens and shade trees. Catalog free. Box 62 Berlin, Md.

CORN HARVESTER One man, one horse, one row. Self Gathering. Equal to a Corn Binder. Sold direct to Farmers for 22 yrs. Only $25 with fodder binder. Free Catalog showing pictures of Harvester. PROCESS CORN HARVESTER CO., Salina, Kans.

Don't Pare Peaches Plums and Pears

IT'S the old, slow and wasteful way of removing the skins when preserving and canning. Not only is it slow and tiresome, but it wastes the fruit next the skin—the finest flavored portion.

You can remove the skin from peaches, pears, and plums just as the best California canners do by using BABBITT'S Concentrated LYE. The U. S. Government Board of Food and Drug Inspection has ruled that this method does not injure the quality or flavor of the fruit.

Simply dissolve half a can of BABBITT'S Concentrated LYE and a half ounce of alum in nine gallons of cold water and boil in an iron kettle. Put the fruit in a wire basket or cheesecloth and suspend in hot solution for two minutes. This will remove the skin. Then wash fruit *twice* in cold water to cleanse thoroughly. For small quantities of fruit, use four tablespoons of BABBITT'S Concentrated LYE and a pinch of alum to one gallon of water.

This method leaves the fruit whole and perfect and does not injure the quality of flavor.

No fuss, no muss, no special utensils.

Insist on BABBITT'S Concentrated LYE to be sure of the best results.

Write for booklet on BABBITT'S LYE

B. T. Babbitt, Inc.
15 West 34th Street New York

Farm Products Prices and Prospects

PENNSYLVANIA APPLE OUTLOOK

Secretary of Agriculture Fred Rasmussen reports that according to estimates made by the Bureau of Statistics, the Pennsylvania apple crop will approximate 9,262,500 bushels compared with 13,000,000 bushels last year.

Lancaster County estimates 85 percent of a normal crop, Bucks 82 percent, Cumberland 81 percent, York, 81 percent, Berks 80 percent, and Adams 80 percent. These are the highest percentages from individual counties. In Butler, Clearfield and Venango the prospect is only 20 percent of a normal crop. The estimate for the state at large is 57 percent.

It is generally conceded that the unusually cold weather that prevailed near the close of April was the principal factor that was instrumental in severely damaging the fruit. It is thought that damage was done by the heavy rains when the trees were in bloom thus preventing fertilization.

SO-CALLED NON-ANCOHOLIC DRINKS

After a conference with Secretary Rasmussen, James Foust, Director of the Bureau of Foods, Department of Agriculture, is conducting an investigation through the special agents, relating to so-called "non-alcoholic drinks." In particular hard ciders are going to furnish the most polific source of violation of the dry laws.

The director states there is a marked interest in the size of the cider crop.

Apricot cider found on general sale was discovered, on analysis, to contain 6.5 percent alcohol, while some cider sold in one of the northwestern counties as sweet cider contained 3.68 percent alcohol. There is no 3.75 percent law in Pennsylvania. What was called grape cider was found to not only contain 6 percent alcohol but to be also colored with coal tar dye. In other sections, what were alleged to be ciders were found to contain anywhere from 6 to 10 percent "kick."

The Director of the Bureau of Foods further states that the investigation will continue and after dealers are prosecuted for misbranding in selling such products, the evidence will be turned over to the District Attorney and federal authorities.

POTASH MAY BE IMPORTED

Acceding to the request of the farmers who urged immediate lifting of the embargo on German potash, the war trade bureau has removed the ban.

The lifting of the ban comes at a time when the American potash manufacturers had only about 35,000 tons of potash on hand. In the order removing the embargo it is set forth that potash may be imported freely from every source except Hungary and those parts of Russia under control of the bolshevik authorities.

Declaring that the presnt plight of the farmer in regard to fertilizer is intolerable, the National Grange and the National Board of Farm Organizations, in a letter to Chairman Vance McCormick, of the War Trade Board, urged immediate removal of th embargo on German potash

SOME HEAVY LAYERS

The All-Northwest Egg-Laying Contest, conducted at Pullman, Wash., which closed its second year's run on October 31, 1918, disclosed some very prolific birds. The highest pen was one of White Leghorns which had an average of 252.2 eggs per bird; the second, Barred Plymouth Rocks with an average of 251.6; third, R. I. Whites, 238 eggs. A Single Comb White Leghorn hen held high honors in the contest with a record of 311 eggs Thirty-one percent of the birds laid over 200 eggs, while the average of all the hens in the contest was 171. The third year records to date compare closely with those of the second year.

From Packing Table to Bench

AUGUST APPLE CROP REPORT

The most important feature of the August report on the apple crop is the very large crop reported from the noth-west, which is somewhat of an increase over the July report. On the other hand, contditions thruout the east have declined, particuarly in western New York, New England and the Virginias. The commercial production for the United States is estimated at 23,075,000 barrels, as compared with 24,740,000 barrels in 1918. Expressed in percentage, the present crop is rated at 48 as against 54.8, the final figure for the 1918-crop.

A Modern Packing House in Burlington County, N. J.

DESTROY ALL CORN SMUT

Much corn smut is in evidence, and from specimens reaching the Pennsylvania Department of Agriculture it is attacking sweet corn as well as field corn.

Corn smut is a fungus disease that may gain entrance to the corn plant at any time, and the only preventative measures are santiary ones.

MARKET FOR AMERICAN FRUITS AND VEGETABLES IN GREAT BRITAIN

In a survey of the markets for American fruits and vegetables in Great Britain, the following facts should be borne in mind:

(1) The war has undone in five years a great deal of the pioneer work in the introduction of American fruits into Great Britain.

(2) Ocean tonnage for the transportation of produce is scarce, and its movement is erratic.

(3) Foodstuffs are still regulated in Great Britain by the food controller and the Board of Import Restriction.

American farm products are popular, and their reintroduction is merely a matter of American skill in handling the trade.

At present there is no opening for American garden truck or berries, owing to the fact that the Netherlands and other nearby countries are flooding the English markets with produce that formerly found its way to the Central Empires. This has already called forth a protest from English growers, whose poduce is mostly grown under glass, with largely increased overhead expenses, due to the high prices of labor, glass, fertilizer, and transportation, and cannot compete successfully with the cheaper product from abroad.

In fruit lines, however, American produce is in line for greatly increased sales.

Popularity of American Apples

Our apples arrive at a time when the English markets are bare of fruit, and their popularity is evidenced by the fact that in the early part of the year over 1,000,000 barrels were imported from the United States. Much of this produce sold at or near the control price of 56 shillings ($13.61) per cwt. of 112 pounds.

In England the apple is regarded as being a necessity not only for food but for health purposes as well. The local crop, whatever it may be, is entirely inadequate to supply the need of an all-the-year-round commodity. This year the local crop will be unusually light, owing to a drought in May and June. The Australian and Tasmanian apple crops have already been disposed of. Upon the United States and Canada, therefore, will fall the duty of supplying the apple needs of the coming season. The local crop will be disposed of before the American crop comes on the market.

Restrictions on Imported Fruit

On June 28 the food controller extended the license for the importation of apples and oranges from September 1, 1919, to March 1, 1920. Pears have not been licensed, as they are considered a luxury, and the present condition of British exchange requires that no money be sent abroad for luxuries. Much effort is being expended by local importers looking towards the modifications of these regulations.

The present control price on apples will remain until September 1, when it may be modified. This is of importance to the American exporter. If the price is maintained as in the past, the home-grown apple crop will be marketed as rapidly as possible, as the grower will not take a chance of deterioration, storage charges, etc., when he knows that his product cannot be sold at an advance over the fixed price.

Apples Should Be Inspected

And equal in importance to grading is condition on arrival. Shippers at a distance from the Atlantic seaboard should have a representative at the seaboard to inspect their product. A sea trip is hard on produce, and if any signs of deterioration are noticed the fruit should be sold on the home markets.

ONE PIPE
ANDES
BETTER HEATING for LESS MONEY
ANDES

DEAR SIR: — My home is particularly hard to heat, the ceilings being 10', 9" high and many windows and doors. We heated 11 rooms very comfortably; well pleased with the economy of the Andes One Pipe.—J. GLEN ESPIE, Caledonia, N. Y., March 27th, 1918.

GENTLEMEN:- Your Andes One Pipe Furnaces have certainly done the trick. I used six of them this winter and our tenants are more than pleased. Several neighbors using hot water heat had freeze-ups costing over $300. We did not spend a nickel for repairs of any kind.—S. WEISS, Reading, Pa., March, 1, 1918.

One of the other five houses in which Mr. Weiss (see above) uses Andes One Pipe Furnaces. He says: "I used an old style furnace in a house and just beside it, an Andes. The people condemned the old style furnace."

"I won't sell it until I can Guarantee it,"—said Andes

SOMETIMES when you have to buy an extra ton of coal or haul an extra load of wood, what a needless waste of good time and money it is to burn it up in heating stoves that never give you back more than half the heat you pay for. How many times you have said to yourself, "I wish I could find a really efficient heating system that would cut down my fuel bills and also keep the house warm and comfortable."

Well, *you can find just that kind of heating system.* Seems like a pretty broad statement to make, and we wouldn't dare make it if we didn't have proof positive that it is true. We know, because this system, the Andes System, is already saving fuel money and giving perfect heat comfort in thousands of homes. What it has done for them it can also do for you.

ANDES SYSTEM
ONE PIPE FURNACE
"Better Heating for Less Money"

The Andes One Pipe Furnace is manufactured by an old, established company with a reputation for products that make good every claim. This product was not put on sale until we *knew* it would do what we claimed for it. We waited until we had *more* than ample proof.

And that is why we *guarantee* the Andes System One Pipe Furnace to give perfect satisfaction. If any Andes owner is *not* perfectly satisfied after a fair trial of the furnace, we'll take it out and the full purchase price will be refunded. Isn't that talking right down to business?

Putting in or taking out an Andes One Pipe is a simple job. One man and a helper can complete it in a day. There is no expense, when installing, of tearing open your walls and floors to put in heat pipes. This means a big saving, both of money and confusion, right at the start.

SEND FOR FREE BOOK

Andes has published a free book telling the whole story of the **Andes System One Pipe Furnace.** If you want to know how the Andes can save fuel money for you; if you want to know how the Andes "works"; if you want to bring into your home, healthful, cheerful warmth-all-over, tear out this coupon N-O-W, before you forget it and send for the Andes Book, "Better Heating for Less Money." Do it today.

Phillips & Clark Stove Co., Inc.
DEPT. P
GENEVA, NEW YORK

PHILLIPS & CLARK STOVE COMPANY, INC., DEPT. P,
Geneva, N. Y.
GENTLEMEN:—Please send me your free, illustrated book, **Better Heating For Less Money.**
Name ....
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AS STEADY AS THE MILL WHEEL!

It works all day—every day

The Mill Wheel turns as long as there is water in the chute. You *must* know that your tractor will "go" as long as there is fuel in the tank.

12 H. P. on Draw Bar

25 H. P. on Belt Pulley

THE HUBER Light Four

Draws three bottoms

Turns an acre an hour

is known for its dependable service. A steady stream of power flows from its mighty motor through all spur gear direct to the draw bar. Light tractor weight combined with great traction power; high wheels that roll easier and increase the amount of surface "grip"; center draft on all loads, preventing loss of power from side pull. The combination of all these—with a dozen other Huber features—makes the Light Four the last word in tractor dependability—and fuel economy, too.

Weight 5,000 pounds; pulls three 14" bottom plows; 12 h. p. delivered to the drawbar; 25 h. p. at the belt; Waukesha, four-cylinder motor; Perfex Radiator; Hyatt Roller Bearings; burns gasoline, kerosene or distillate; center draft; two speeds, 2½ and 4 miles per hour.

Write for "The Tractor in the Making", an interesting story of the development of the tractor as reflected in the successive models of the Huber for more than twenty years.

THE HUBER MFG. COMPANY
215 Center Street Marion, Ohio
Canadian Branch, Brandon, Manitoba
Makers of the Huber Junior Thresher
Good territory still open for live dealers

It Does Pay To Grow Fruit

Men who make a business of marketing fruit, say high prices will be the rule for many years. It will pay you to plant five or ten acres (or more if you can) in apple, peach and pear trees; within a few years they will be the best paying crop on the farm. Trees are easy to care for, and

The Money Returns Are Big

But do not delay—plant your trees this fall, in ideal conditions of weather and soil; the roots have no chance to dry out and the sun will no longer burn so hotly. Plant peach, apple, cherry—in fact all kinds of trees that you need. Write us today.

HOOPES, BRO. & THOMAS CO.
41 Maple Avenue West Chester, Penna.

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GALLOWAY'S GREAT OFFER

Get my new advertising proposition. It will save you much cash on any style of Galloway Complete Spreader. Ask for it now—today—as the time is limited. Remember that Galloway Spreaders take less horse and man power, spreading more land thoroughly with less effort than old style, cumbersome machines. Will supply your soil with plant food. Enables you to cash in big on record-crop prices. Helps your land to work overtime. Gets you 50 bushels where you got 25 before. Remember, manure is money but it must be spread on your fields to be worth anything.

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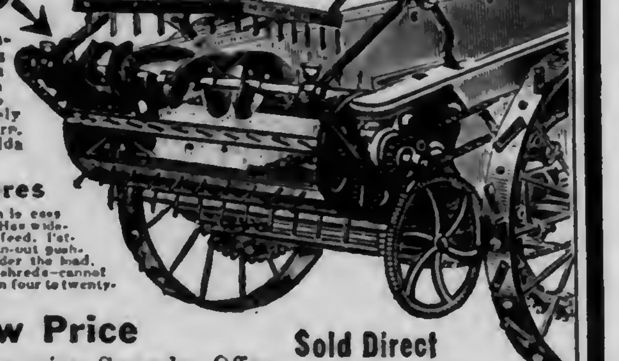

The greatest spreader improvement in years. Makes positive, manure distribution of six to seven feet. Breaks up all lumps that might slip through the beater. Absolutely pulverizes every bit of manure. Cuts down trips across the fields thus saving time and labor.

Eleven Great Features

The new No. 8 Galloway low down is easy on the man and easy on the horse. Has wide-spreading V rake. Patented roller feed. Patented automatic stop uniform clean-out push-board. Short turn, all wheels under the load. All steel beater—tears manure to shreds—cannot twist, warp or break. Spreads from four to twenty-four loads per acre.

Write for Low Price

Send at once for low price Spreader Offer and Galloway money-saving Spreader Books. They point the way to the best Spreader made at big savings. Close shipping points save freight. WRITE NOW—BUY TODAY AND SAVE MONEY

Sold Direct from Galloway's Great Factories

WM. GALLOWAY CO. Box 199 WATERLOO, IOWA

POULTRY

EGG RULINGS

A conference was held with Secretary Rasmussen, of the Pennsylvania Department of Agriculture, Director of Food Bureau James Foust, Chemist Charles H. LaWall, and Special Agent R. M. Simmers, to determine two points that have been raised by the trade in connection with the recently enacted fresh egg law.

First. What is meant or understood by the chalaza?

The chalaza is the thicker portion of the egg white immediately surrounding the yolk and holding it in its proper place in the centre of the egg. As the egg ages the chalaza weakens and becomes thinner and the yolk sinks to the side of the shell, where it sometimes becomes attached in very old eggs.

A Successful Farm Poultry Woman and Her Flock

Second. After what period of time does an egg lose its identity as a fresh egg in interpreting the act?

This depends upon many factors, among which are the following:

First. An egg laid in March or April and kept under proper conditions will retain the characteristics which distinguish a fresh egg for from three to four weeks. In warmer weather this time would necessarily have to be reduced, and an egg laid in very hot weather and possibly allowed to remain in the nest for twenty-four hours or more, has lost these characteristics to such an extent that it is not as good as an April egg kept for a month under favorable conditions, and it should not be offered for sale or be permitted to be sold as and for a fresh egg.

Nor can an egg which is allowed to remain exposed to ordinary atmospheric conditions in a retail store for several days or a week in warm weather be expected to retain the characteristics which are expected of a fresh egg.

BROODY HENS

It is not always true that when a hen shows signs of broodiness it is nature's hint that she needs a rest. When a hen lays a few eggs and then becomes broody it is due to racial rather than natural or physical causes. In the case of the hen that has been laying for a long period, it is undoubtedly true that signs of broodiness indicate that exhausted nature demands a rest, and it should be given. It is not always desirable to put eggs under the broody hens and allow them to bring off a brood of chickens; so in such cases it is necessary to break up the fever, at the same time giving the hen a rest.

Cruel methods are sometimes resorted to in breaking up the broody biddies, when more humane treatment would serve the purpose just as well. Dipping them in cold water will no doubt break them, but the shock to their bodies, which record a temperature of about 110 degrees, is dangerous. Confining them in light coops without food or water for several days, as practiced by some, will also break them, but when they are released from their prisons the hens are nearer dead than alive.

When a hen first becomes broody it is better to let her sit for a few days, then break her up. This will give the hen a rest and allow her system to recuperate, besides making it much easier to break up the broody fit than if taken in hand when the symptoms first appear. After remaining on the nest two or three days, the hen may then be confined in an airy coop or pen, large enough to admit of exercise, but free from anything from which she can make a nest. Feed lightly and give plenty of water. A small coop with a slat bottom through which the air can circulate also makes a good jail for the broody hen. A sitting hen must feel the sensation of warmth under her body when she is on the nest, else she will soon give up the work. A small red rag fastened to the feet of a biddy in such a manner as to attract her attention is said to be an effective way of breaking broody hens, but this probably might be classed among the cruel methods, as the hen will continually be trying to get away from the rag.

Confinement for a few days is as good a method as any, and, if given food and water when released, the hens will be ready to commence laying again in a short time. If allowed to occupy nests as long as they are disposed they will often sit for weeks, and may not lay again for several months, thereby becoming a source of loss instead of profit.—W. F. P.

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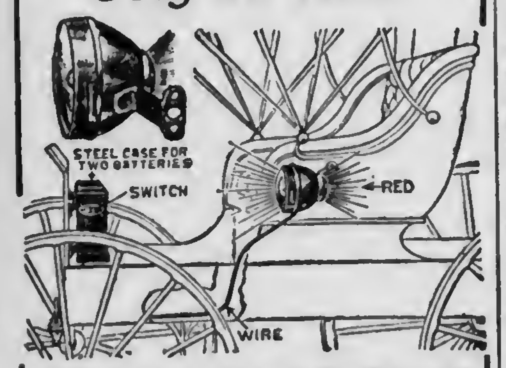
Obey the Law!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Combination With Red Tail Light

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You can remove every night driving danger and comply with the law if you will equip your vehicle with the Delta Electric System, designed and built to meet all legal requirements.

It is life insurance and protection against arrest and the cost is so small that no vehicle owner should be without one.

Burns two common No. 6 dry-cells, procurable anywhere, and they last for months in average service.

$3.85 Complete with Batteries
See your dealer or send us $3.85 for system shown above.

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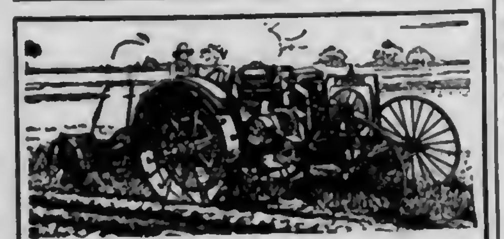

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A light, easy running Kerosene Tractor for general farm work. Is small, sturdy and has plenty of power. Made and sold by Frick Company, manufacturers of substantial Farm Power Machinery since 1853. Frick Tractors can be seen at Akron, O., and Harrisburg, Pa., demonstrations Aug. 12 and 13 and at Butler, Pa., Aug. 21 and 22. Write for price and further information. Dealers wanted. Immediate deliveries.

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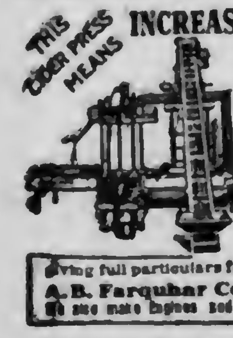
347 W. Main St., Waynesboro, Pa.

THIS CIDER PRESS MEANS **INCREASED APPLE PROFITS**



A Farquhar Hydraulic Cider Press will turn your culls into good selling cider. You can also make money pressing for your neighbors.

Our high pressure construction gets all the juice from the apples with minimum power. Presses in sizes from 15 to 400 barrels a day. New Catalogue giving full particulars free on request.

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CHICKS 10 CENTS EACH and up. Rocks, Leghorns, Reds and broilers. Money back for dead ones as far as Colorado, Texas and Maine. Pamphlet free. SANDY KNOLL HATCHERY C. M. LAUVER, Prop., Box 48 McAlisterville, Pa.

Looking for a Farm? Don't fail to send for our list and prices. T. S. AUBLE CO., WELLINGTON, OHIO

IN THE POTATO SECTIONS

Tioga Co., N. Y.—Have been rushed worse this year than during the war, getting potatoes in later than any year except the wet June of 1916. The season here has been very dry from late May until the rains of two weeks ago; even those were much lighter than along the coast. The result is that potato stands are poor, vines are small and insects have been doing an immense amount of damage. The tarnished plant bugs and both kinds of flea beetles have been at work and have done an amount of damage far greater than is generally known, as their ways of injuring the foliage do not show up as plainly as does that of the ordinary potato bug. Oats are cut badly by the drought. Hay is weedy, but about a normal yield. Corn is looking fine and wheat and rye are good.

The potash matter looks very plain to a potato grower wanting fertilizers. The cities want to buy the farmers' products and get them cheap through Canadian competition. But city interests want to sell the farmers potash, a "raw material in the manufacture of potatoes," and because the city interests have the President and Congress on their side, they shut out foreign potash by an absolute embargo on imports this spring, and for next spring either a tariff duty or a system of licenses to keep up the price of the potash made in this country.—Daniel Dean, July 27.

Aroostook Co., Maine.—Our potatoes at present look favorable for a normal crop. The weather has been dry, but under these conditions we get a more satisfactory market generally than with wet weather. I think that four weeks will put Aroostook County Cobblers on the market. Wheat and oats promise about a 90 percent crop. Hay is normal, with conditions very favorable for harvesting, making fine quality. Would say that potatoes will give about a 90 percent crop.—L. W. T., July 24.

BELGIAN HORSE SHOW

The first International Belgian Horse Show will be held at Waterloo, Ia., September 22-28. A special commission from Belgium will attend the show for the purpose of purchasing stock upon which to rebuild the Belgian breed in its native country. Over $5,500 are offered in prizes.

COUNTY NOTES

Union Co., Pa., (C) Aug. 13.—Oats are all cut and stored. Some oats are threshing well by the load, and will run from 40 to 50 bushels per acre. Where wheat stood up well it yields from 18 to 25 bushels per acre. Much timothy seed has been made in this county and is bringing good prices. The second growth of clover is good where hay was made early and not pastured. Corn needs rain to finish the ears and so do the late potatoes, as the early ones were a small crop. Oats stubbles are being plowed, but the ground is too dry to do real good work, and manure is being hauled to fields for wheat. A number of tile silos have been built in this section, and some wooden ones, too, as silos are being appreciated more every year in producing milk. New wheat is being marketed at $2.20 nearly as fast as it is threshed, but the grains are not as plump as usual. Plums were a fair crop, and apples will be a better crop than was expected earlier. Many fresh cows are being brought into the county and sold to dairymen, who try to keep all the cows they can pasture and feed.—J. N. Glover.

Sussex Co., Del., (S) July 26.—Seaford wants the proposed 14-foot concrete highway across Sussex County from Georgetown to connect with the western highway, and local citizens are making a desperate effort to get it. The yield of wheat disappointing in many sections of the state this year. Smooth wheat seems to have suffered more than the bearded varieties. William T. Massey qualifies as the cucumber king of this section. He has picked and delivered 400 hampers from 1½ acres, receiving $900 for the lot. The cucumber crop has been a profitable one in this section this year.—K. P. T.

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WITH SEMI-SOLID BUTTERMILK

All You Want! Just When You Want It! BEST HOG FEED ON EARTH!

SEMI-SOLID BUTTERMILK is pure creamery buttermilk with NOTHING added—nothing taken away but the water. NOT MODIFIED by the addition of SULPHURIC ACID or any other preservative. Its own natural LACTIC ACID keeps it fresh.

We Guarantee Every Barrel of It

Also guarantee that you will be satisfied with results from feeding it.

Our SEMI-SOLID BUTTERMILK is the only buttermilk on the market that you can drink yourself or use to make batter-cakes for your table.

Iowa Agricultural College, Ames, Iowa, fed two groups of hogs, same number, same litter—record per 100 lbs. gain in weight.

	Days	Corn	Meat Meal	Wheat Middlings	Weight
No. 1	218	442 lbs.	33 lbs.	31 lbs.	296 lbs.
No. 2	156	148 lbs.	9 lbs.	14 lbs.	299 lbs.
Gain or Saving	62	294 lbs.	24 lbs.	17 lbs.	3 lbs.

No. 1 had no butter milk. No. 2 had all they would drink. You can do as well or better.

Used by the Packers and other feeders in CAR LOTS.

Feed Your Hogs and Poultry SEMI-SOLID BUTTERMILK

It keeps them healthy and gets them to market earlier.

SEMI-SOLID BUTTERMILK is a safe feed—sterilized and pasteurized.

A 500-lb. barrel is equal to 1,000 gallons of buttermilk.

To save you freight plants have been built in several different states.

Why use a substitute or Modified Buttermilk? Use SEMI-SOLID BUTTERMILK—it's pure and unadulterated. Send your order today.

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1370 ACRE FARM

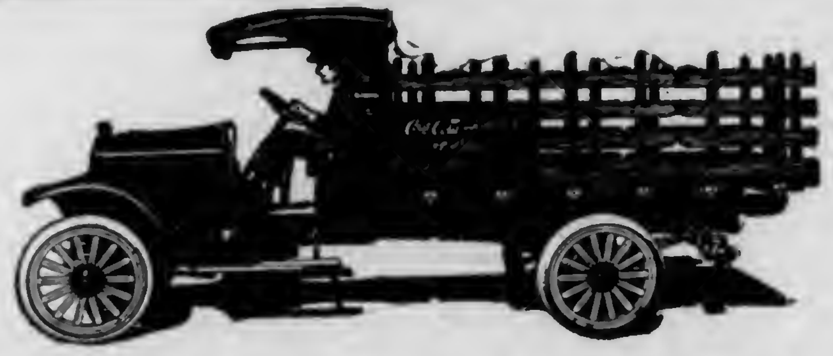
For Sale within two miles of Hartles Station on the Detroit, Toledo & Ironton R. R., 12 miles north of Ironton, Ohio, and on macadamized road. 300 Acres cleared, the remainder in unculled second growth timber from 45 to 75 years old. Plenty of water and all fenced. Good 7-room dwelling, 35 tenement houses, store building, four stables, crib, warehouse, mill and machinery for grinding, clay, orchard. Large area underlaid with No. 5 coal, limestone and good No. 2 fire clay. Well suited for stock farm and timber business. E. B. WILLARD & CO., IRONTON, OHIO.

IF YOU WANT to sell or exchange your property write me. JOHN D. BLACK, 105th Str. Chippewa Falls, Wis.

200 Acres $2800, with Pair Horses, 5 Cows and

Wagons, harness, full list implements, quantity of crops, 2½ miles to town; 60 acres smooth fertile fields, 30-cow, wire-fenced, spring-watered pasture; wood, timber, fruit. Practically new house, large barns, silo, &c. Owner retiring. $2,800, part cash, gets everything. Details this big-producing farm page 16 Catalog Bargains 19 States, copy free. STROUT FARM AGENCY, 1422 B. E., Land Title Bldg., Philadelphia.

Rich Michigan Farms Low prices. Easy terms. STAFFELD BROTHERS, 15 Merrill Building, Saginaw, Michigan.



Model A 3500 Pounds $1775	
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The Truck That Sells By Comparison.

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It pays to think! All we ask is the opportunity to show you DAY-ELDER trucks and the chance to demonstrate their unchallenged supremacy at their prices in America.

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THE SPOOK

By C. A. WHITNEY

I was returning from an unsuccessful search for the cows. It was just at the edge of evening and I was a lad of fourteen. My course was along a road which ran thru a a deep ravine, skirted on either side by dense forest, leading to an Irish settlement some two miles above our place. Showers were threatening and darkness rapidly approaching. Altho it was pretty dark thru the woods, I felt perfectly safe with Rex, my faithful dog, as my protector. I was hurrying home as fast as possible to avoid the shower—Rex running a short distance in advance.

When about half way home, right in the darknest part of the road, Rex suddenly began to growl and rushed back close in front of me. This startled me somewhat for it was very unusual for him to behave in this strange manner. Rex had been my almost constant companion for several years and I had never known him to back down an an inch for anything. It was his disposition to tackle on the instant, whatever came in his way, and fight to a finish.

I stopped and listened but could hear nothing that should alarm the dog. I induced the dog to go on and proceeded at a slow walk for a short distance. He continued to growl fiercely and was becoming more alarmed at every step. It was quite evident that he had either seen or scented something very unusual, as we had, in past experiences, come in contact with all kinds of animals known to these parts and I had never known him to act this way before.

I stopped and listened again. This time I could faintly hear some noise like that made by some heavy animal walking in the road, some distance ahead. Had it not been for the strange actions of the dog, I would not have been alarmed at this noise. But Rex was fairly roaring with rage by this time. He would run ahead a few steps, stamp his feet in the dust and give a sort of half muffled bark, and then come back roaring like a lion, with the hair on his back all pointing towards his head.

How I wished for a flash of lightning just then, but none came—the shower was working off towards the north.

Presently there came a little break in the clouds which allowed a little more light to come thru the thick trees. Straining my eyes I could distinguish a light colored object, which appeared like a large ball floating in the air, several feet from the ground and coming towards me. A sudden thrill of fright ran thru me. What this object could be—floating so steadily and slowly thru the air—was beyond my comprehension. I tried to attribute it to some natural cause, but nothing seemed to suit the conditions.

I thought of all the stories I had ever read about will-o-the-wisps, ghosts, hobgobblins and the like, but could make none of them conform to the strange object which was coming straight towards me. All of the will-o-the-wisps, ghosts and that sort of thing that I had ever heard of were silent visitors. Altho the object before me seemed to be floating in mid air, yet I could hear that scuffing, slap, slap, slap, as if made by some heavy beast walking in the dust.

As the object came nearer and a little more light came thru the trees I could see that instead of floating in the air it was supported by some kind of form. This discovery changed the tenor of the situation. Whatever it was, it was walking on the earth. I felt easier for a moment. I soon saw, however, that it was much too tall and much too large for a human being. I tried to account for this strange appearance but the unusual behavior of the dog brought all my reasoning to naught.

It finally came to my startled mind that I was about to meet one of the much dreaded spooks, which I had often heard a certain old Irish lady tell about—in the form of a human giant and that the light colored object, which at first seemed to be floating in the air, was the head of the monster. A sudden terror siezed me as I began to distinguish the features of the terrible object. A large pair of eyes glared at me from the darkness. The huge mouth wore a broad, silly grin and the whole countenance bespoke a greedy, blood thirsty fiend. And the horror-of-all horrors was one long, slim horn in the middle of its head that pointed foreward and upward at an angle of about forty-five degrees. I could now distinctly hear the breathing of the monster, which sounded like the wheezing of a leaky blacksmith's bellows.

I tried to think of running into the woods and thus avoid meeting the terrible thing, for it was evident that we must soon meet if I did not get out of the road. It was coming toward me with an even, steady tread.

I tried to move, but seemed to be fastened to the ground. Cold chills were running up and down my back. Large drops of prespiration stood out on my forehead and I was shaking with fear. I tried to speak to Rex who was pacing to and fro across the road, close in front of me and snarling with rage and terror. But I was so benumber with fright that I was speechless and motionless.

I did not know much about spooks, for this was the first one I had ever seen. I did not know what they would do to boys when they caught them alone in the woods after dark. But I was sure from the fiendish expression of this one that it intended to catch me up on that long, slim horn and toss me in the air, just for sport—or something of a similar nature.

I was confident that at one word of command Rex would tackle the monster, but, as he was my only protector I hesitated in taking the risk. It was evident that he would stand by me to the last minute. He stayed close in front of me and never once tried to get behind.

On came the monster with that silly, idiotic grin, which I could see more distinctly at every step. Those glaring eyes seemed to pierce my very soul with every glance. I could see those huge nostrils expand and contract with every breath. And that monstrouse mouth displayed two rows of terrible teeth, large enough seemed to fairly glisten in the darkness. And that one long, slim horn pointing ever towards me!

I could distinguish every feature now as clearly as if it were broad daylight. Words fail to describe the terrible sensation that swept thru my body. I was dizzy, sick and faint. I wanted to die. I wanted the earth to swallow me up—anything rather than meet the terrible monster, ever coming closer to me.

If I had only been a better boy regularly, as mother had taught me to do. I might have felt more certain of deliverance from the terrible situation. All the bad things that I had ever done flashed thru my mind at once.

I stood there for hours—so it seemed—the horrible creature coming nearer and nearer every minute. Yet I could not move. I suffered untold agony.

Presently, some silent voice seemed to tell me that something must be done, and done quickly, or I was doomed.

What seemed my only chance of escape was to get Rex to tackle the monster and for me to run for my life while he was being disposed of. Poor, faithful Rex! I could almost hear him cry out with pain as that terrible horn pierced his body and tossed him into the air. But it was my only chance.

I pulled myself together as best I could and prepared for the worst. By a supreme effort I managed to gasp the words "Take 'im Rex".

With a snarl of rage Rex dove ahead and there came from the darkness, in a shrill, piping voice:

"Git out ye whelp. Call off yer dog! The saints protect us!" and more of the same.

The mystery was soved.

An unusually tall, old Irish lady who had something wrong with her breathing—asthma, I guess—was coming from town, carrying on her head a new bushel basket. In the basket were a broom and many packages of groceries and dry goods. She had removed her shoes, tied them together and hung them over the broom handle, outside the basket.

Most of our troubles are only imaginary.

RHYME OF THE ORCHARDIST

In the palmy days of long ago,
When the farmer's tools were the plow and hoe,
You could plant an apple tree any day,
With the firm conviction t'was there to stay.

But there came one day from out the West,
A terrible scourge in an orchard pest,
The doings of which made the orchard-man pale;
T'was known as the deadly San Jose scale.

The East, to help out in the coming disaster,
Which threatened destruction faster and faster,
Let loose on the farmer, exceedingly wroth,
The persistent and dangerous Codling moth.

Then followed in sequence, without even a stop,
The fungi, perplexing—Bitter and Brown rot.
The scab, and the aphis, Green, Wooly and Black,
Until the poor farmer cried, "Alas and Alack!

I'll grow no more trees to furnish food for the scum,
That live by the sweat of my brow, I vum,
But its back to the good old crops for me,
That grow in the ground, and not on a tree,
Like 'taters and punkins and timothy hay,
Same as they did in grandad's day.

For I'll bet by Heck, for each apple in sight,
There's a million bugs, or more, to fight.
And they spoil the fruit, and kill the tree,
And I guess I'll just quit afore they git me."

Warmed by the sun, and wet with the dew,
Apples blossomed with courage, and fruited; a few
Being fine, but most of the time, they were made
Into cider, or fed to the swine.

Now the man from the West, with the long railroad haul,
Must grow perfect fruit or go to the wall.
That he won, is a fact that none can deny,
And all who'd make good must his methods apply.

For he pruned and he sprayed and he coddled each tree,
Till it yielded its fruit abundantly.
And the fruit was perfect, and smooth and free
From worm or blemish, that grew on the tree
That was pruned, and sprayed on leaf and bough,
By the man who progressed—the man who knew how.

Warmed by the sun, and wet with the dew, the apples
Blossom with courage, and fruit. Just a few
Being culls, for most of the time,
Full ninety percent are graded, "A prime".

—An Apple Grower.

Remember all the things you said you'd do for the boy once he got home from France? Don't forget them now, and he'll find the old farm is not such a bad place after all.

When the merchant has some desirable goods to sell he says so in the paper—not usually in a little want ad, but in big type in "display space." Maybe here's a hint for the farmer with two or three choice cows to sell.

The European farmer raises more crops to the acre; the American farmer more to the man. In general, this expresses the difference between peasantry and an independent agricultur.

A home bureau member has discovered that a rough scouring mit is just the thing for removing the thin skins from new potatoes.

What can a man Learn from Looking at a Tractor in a Tent

IF you have ever been to a tractor demonstration, you probably know the earnest way some salesmen have of taking you into a tent and pointing out all the fine points of the tractor they are trying to sell.

They will show you its engine and its wheels and its gears and its clutches, and tell you why they are better than those of any other tractor on the market.

Now, the intelligent farmer, when he goes to look at a tractor, wants to be shown by the tractor itself.

For eight years the G O Tractor has been showing farmers all over the country just what they wanted to know. It has shown them that it can do anything they want it to, and do it economically, and keep on doing it.

There is nothing "eye-filling" about the G O Tractor. It is a four-wheel, four-cylinder tractor—the simplest and most practical construction known. There is no loss of traction due to the shifting of weight to the wheels of the implement. Its pull increases as the traction increases, because the drawbar is free-swaying — not rigid — eliminating all side draft and making it safe on hills.

The G O driving mechanism is the biggest advance in tractor engineering which the industry has seen. It gives six speeds forward and six reverse—a right speed for plowing in any sort of soil; a right speed at the belt pulley for any kind of machine. It is so easily controlled that even a child can operate it. All gears are enclosed in a dust-proof oil bath, adding years to their life.

The facts about the G O Tractor are open to anyone who is looking for sound, common horse-sense—not features or talking points. You may be interested, also, in knowing more about the company behind the G O Tractor—its guarantee and its idea of what constitutes real service. A post card today will put you under no obligation.

The General Ordnance Company
Tractor Division
Western Sales Office and Factory:
CEDAR RAPIDS, IA.
Executive and Eastern Sales Office:
TWO WEST 43rd STREET, NEW YORK
Eastern Factory:
DERBY, CONNECTICUT

Markets

PHILADELPHIA PRODUCE

Philadelphia, Pa., August 18, 1919.

Supplies of potatoes are not as heavy as might be expected for this season of the year, and prices are quite a little firmer and higher than a week ago. Most of the supplies are from nearby New Jersey, with only a few still coming from the Eastern Shore, Delaware and Maryland. Southern potatoes sold today at $5@6.50 per barrel for No. 1 potatoes, while No 2s and culls sold all the way from $1.50@4 per barrel. New Jersey Giants in 150-pound sacks sold generally at $5.25@5.35 per sack, while the New Jersey Cobblers in bulk sold at $3.70@3.75 per cwt. A fairly liberal supply is being hauled in by the nearby farmers and those are selling at $1.15@1.40 per ⅝ basket for No. 1 stock with No. 2s at 60@75c per basket.

There has been but a small increase in the supplies of sweet potatoes, and good prices are still prevailing. North Carolina is still forwarding a few which sold today at $8@9 per barrel for primes with No. 2s at $4 per barrel. The Eastern Shore is supplying the greater bulk of the sweet potatoes at this time, and these sold today from $8.50@9.50 per barrel for primes with No. 2s at $4@5 per barrel. The New Jersey crop is also starting forward, and these sold today at $2.25@3 per ⅝ basket for primes and $1.40@1.75 per basket for No. 2s.

Vegetables

There has been quite an advance in the price of both green and wax beans. Supplies have been much lighter and sales are now ranging from 50c@$1.50 per ⅝ basket for green beans, according to quality, and from 25c up to $1.50 per basket for the wax as to quality and condition. Some of the beans are very poor and ordinary, while fancy stock is in active demand at top prices. We fail to note any change in the market on beets, which are in moderate supply and selling at 3@4c per bunch for fancy beets with poor ones at 2@2½c per bunch, while the loose beets in hampers are finding rather slow sale at 75c@$1 per hamper or $1.50@2 per barrel. There is some little improvement to note in the cabbage market, supplies of which appear to be decreasing. Sales of New Jersey cabbage are being made at 50@65c per basket, with hardly enough Pennsylvania barreled cabbage here to make a quotation. There is also practically no change in the market on carrots, bunches selling at 2@3c each, while the loose carrots in hampers continue to sell from 75c@$1.25 per hamper. There is quite some improvement in the celery market, supplies of which are only moderate, but demand is much more active and good celery is now selling readily at 35@65c per bunch, with hearts at 6@8c per bunch.

Corn is also quite a little firmer under lighter supplies. Good Pennsylvania corn is now selling readily at $2.50@3.50 per hundred ears, while the New Jersey ⅝ baskets bring 90c@$1.50 per basket with poor stock below these quotations. There is some improvement to be noted in cucumbers which are now selling at 35@65c per basket with pickles at 75c@$1.25 per basket. Egg plants are from 25@50c per basket lower than they were a week ago, as now the bulk of the sales are being made around $1.25 per ⅝ basket for good egg plants, with poorer ones at $1 per basket. The lettuce market has been fluctuating from day to day, with the tendency gradually downward, as supplies have been increasing. The market is showing a wide range in price as the lettuce is showing a very wide range in quality and condition. Today best lettuce sold at $2@2.25 per box, with most sales of ordinary offerings at $1.25@1.75 per box, while some very poor sold as low as 50@75c per box. Lettuce in hampers also sold from 50c up to $1.75 per hamper. The market on yellow onions has been ruling rather slow and draggy, with values gradually seeking lower levels. While a few extra fancy New Jersey onions sell at $1.40@1.50 per ⅝ basket, the great bulk of the sales of good onions is being made around $1.25 per basket, with some poor ones at 75c@$1 per basket. Some western onions of very large size sold today at $3.50@3.75 per 100 lb. sack, while western white onions (boilers) sold at $2.40@2.50 per 100 lb. sack. Pennsylvania yellow onions in bushel hampers are selling from $1.25@1.85 per hamper, while New Jersey white onions sold today from $1.50@2.75 per hamper. The movement, however, is very slow and draggy and the market is unsettled.

Lima beans are very scarce and prices are higher than they were a week ago, sales of New Jersey stock being made today at $2.75@4 per ⅝-bushel basket, while some bushel hampers have brought from $5.50@5.75 per hamper. Okra is in light supply and meeting a good demand for the small sizes at $1.75@2 per basket. Large okras are moving slowly at $1@1.25 per basket. Parsley remains about steady at $1.25@2 per 100 bunches. There have been no fresh peas on the market for some time, and some good Norfolk peas would probably command good prices. Peppers are a trifle higher than a week ago, now bringing from 50@65c per basket mostly with a few fancy at 70@75c per basket. Squash is plentiful and slow at 15@30c per ⅝ basket. There is practically no change in the tomato market, best selling at $1.25@1.50 per ⅝-bushel basket, with most sales of regular run of supplies at 65c@$1 per basket, with culls and No. 2s at 35@55c per basket. Turnips are meeting a slow sale at from 25@50c per basket.

Fresh Fruits

Our market continues to be amply supplied with apples from nearby New Jersey and Pennsylvania growers. A car of southern apples was offered at the depot today, of the Duchess variety, but the trade would not take them at the prices asked. There was also a car of Virginia barreled apples offered which sold rather slowly at $3@6 per barrel, as to quality, the car being made up of small lots of various varieties. The nearby apples are lower in price, good hand-picked fruit now selling mostly at 75c@$1.50 per basket with No. 2 apples at 50@75c, and culls and windfalls at 25@50c per basket. There is also an ample supply of peaches from nearby New Jersey and Delaware points, which are selling well when fancy, but many of them are very poor, being nothing but the windfalls which were blown off the trees by the severe storm of last week. This makes a very wide range in prices, best peaches selling at 75c@$1.50 per basket, with culls and windfalls from 10@50c per basket. Bushel baskets of Delaware peaches sold today at $1@1.25 for poor ones, while a car of good Delaware peaches was being sold at $2.75 per bushel. Crate stock sells from $1@3 per crate for both the New Jersey and Delaware fruit. Western peaches sold today from $2@2.75 per bushel.

The same kind of a market that is prevailing on peaches is also prevailing on cantaloupes. Many of the cantaloupes are very poor in quality and condition, due to delay in shipping and transit caused by last week's severe storm and prices are showing an extremely wide range as to condition and quality. Today Delaware cantaloupes sold all the way from 40c up to $1.50 per crate for the standards, while the jumbos sold at 75c@$1.75, and flat crates at 20@75c per crate. New Jersey cantaloupes brought from 25c@$1.25 per ⅝ basket. As soon as this poor stock is cleaned up there will be a better and a more regular market on both cantaloupes and peaches.

There were 40 fresh cars of watermelons here today, which caused the market to decline. One car sold at $450, and another car at $425, but the rest of the sales were made from $150@375 per car, mostly $275@350. Huckleberries are showing little or no change at 20@23c per quart, while the blackberries rule firm at 18@22c per quart. A few pears are arriving and selling at $3@3.50 per bushel, mostly when the stock is good.

Poultry

Altho the supplies of live poultry have been fairly liberal during the past week, there has been a good active demand which kept supplies pretty well cleaned up from day to day at slightly higher prices on fowls, with chickens ruling very firm at practically unchanged prices. Today live fowls sold at 36@38c per pound, and spring chickens at 36@40c, while the Leghorn springers sold at 32@35c per pound. Old roosters were unchanged from day to day at 24@25c per pound. Ducks have ruled steady at the decline reported in these columns last week, selling generally at 30@32c per pound for young spring ducks, while the old ducks were rather slow at 26@30c per pound.

Eggs

There is practically no change in the egg market. As is usual at this time of year, many of the supplies of eggs will not grade up to standard and this class of eggs is moving out slowly at irregular prices as to quality and loss shown. Strictly fancy eggs are rather scarce and such are firm at full quotations and in most instances are bringing a premium over quotations, as follows: Pennsylvania and other nearby current receipts, 50c; nearby firsts, 52c; nearby fair to good, 45@48c; seconds, 36@42c; Western eggs, 48@52c; southern eggs, 36@46c as to quality and loss shown.

LANCASTER PRODUCE MARKET

Lancaster, Pa., August 18, 1919.

Dealers, eluding the closest police supervision, succeeded in cleaning out the local markets of eggs on three successive days with the result that in that period, quotations advanced 10 cents and reached 60 cents a dozen this afternoon. More farmers were along the curb today than any other period this summer, and all produce was abundantly offered. Corn was over-plentiful and prices declined.

Butter and Eggs.—Creamery butter, 63@70c lb.; country butter, 65@70c lb.; eggs, 55@60c doz.; duck eggs, 50c doz.; goose eggs, 10c each.

Poultry.—Dressed old chickens, $1.75@2.50 each; dressed young chickens, $1@1.75 each; old live chickens, 28c lb.

Vegetables.—Lettuce, 20@25c head; spinach, 20c per ½ pk.; turnips, 15c per ½ pk.; cucumbers, 5@8c each; potatoes, 25@30c per ½ pk.; do., $1.75@2 bu.; sweet potatoes, 30c per ½ pk.; cabbage, 5@10c head; cauliflower, 10@15c head; lima beans, 20@25c lb.; do., 50c quart; tomatoes, 10@15c box; beans, 10@12c per ½ pk.; beets, 5c bunch; corn, 10@25c doz.

Fruits.—Apples, 15@35c per ½ pk.; blackberries, 20c box; huckleberries, 20c box; watermelons, 35@85c each; cantaloupes, 6@10c each; pears, 5@10c box; peaches, $1@1.50 basket; do., 10@20c box.

Grain Market.—Wheat, $2.20 bu.; rye, $1.65 bu; oats, 80c bu.; corn, $1.95 bu.; timothy hay, $31 ton; mixed hay, $30 ton;; wheat straw, $16 ton; oat straw, $15 ton.

YORK PRODUCE MARKETS

York, Pa., August 18, 1919.

The quotations in all lines of produce were considerably lower than for the preceding week. Even those products that were not plentiful were draggy. Tomatoes were selling for 50@75c per bushel, and of good grade, too. One farmer was selling large Evergreen corn at 25c per dozen when several buyers asked when it would be cheap, as they wanted to put up. "Cheap!" he said, "I will tell you, what I have at home will go to make hams and sausage."

Eggs.—48@50c per dozen.

Butter.—Country, 50@55c lb.; separator, 55@65c lb.; milk, 10c qt.

Poultry.—Hens, 27@28c lb.; springers, 30c lb; dressed, 75c@$2 each.

Vegetables.—Potatoes, 12@30c ½ pk.; $1.75@$2 per bu.; cabbage, 3@8c head; beets, 5c bunch; radishes, 5c bunch; onions, 5@10c box; 20@25c ½ pk.; lima beans, 40@50c qt.; soup beans, 20@25c qt.; celery, 5@12c stalk; rhubarb, 4@5c bunch; egg-plants, 5@10c each; beans, 10@15c ½ pk.; lard, 40@42c lb.

Fruit.—Apples, 12@50c ½ pk.; plums, 8@20c box; peaches, 10@15c box; 30@50c ½ pk.; $1.50@$2 per basket.

Retail Grain Market.—Wheat, $2.40; corn, $2.25; oats, $1.10; rye, $1.65; bran, $3 per cwt.; middlings, $3.50 cwt.

Wholesale Grain Market.—Wheat, $2.20; corn, $2.10; rye, $1.40; oats, 80c; bran, $50 per ton; middlings, $70 per ton.

BALTIMORE PRODUCE

Baltimore, Md., August 18, 1919.

Produce.—Potatoes, new, No. 1, $3.25@3.75 cwt.; do., No. 2, $1.50@2. Cabbage, nearby, $1@$2 crate; do., $5@$8 per 100. Lettuce, 75c@$1.25 basket. Onions, nearby, $3@3.50 cwt. Cucumbers, 40@50c basket. Carrots, 1@3c bunch. Green beans, 75c@$1 bu.; do., wax, $1@1.25 bu. Lima beans, $2.75@3.25 bu. Beets, 2@3c bunch. Green corn, 20@35c doz. Tomatoes, 50@75c basket. Squash, 20@30c basket.

Fruit.—Apples, No. 1, $5@6 bbl.; No. 2, $2.50@4.50 bbl.; $1@2 bkt. Huckleberries, 18@22c qt. Cantaloupes, 25@75c basket. Peaches, $1.50@3 bu.; 75c@$1.50 basket. Watermelons, 40@50c per 100. Pears, $1@2.25 bu. Crabapples, 75@90c basket.

Butter.—Creamery, western fancy, 56@57c; choice, 54@55c; pound prints, 57@59c. Nearby rolls, 46@47c. Dairy prints, 46@47c.

Eggs.—State, Pennsylvania and nearby, 47c@48c; Eastern Shore and Virginia, 47@48c; Southern, 46@47c.

Live Poultry.—Springers, 33@38c lb.; old roosters, 22@23c; old hens, 35@36c lb.; ducks, young, 28@30c; do., old, 25@26c; guinea fowls, 90@$1.

Grains.—Wheat, new No. 1 red, $2.38¾; do., No. 2, $2.35¾; do., No. 3, $2.31¾; garlicky, $2.29¾@2.36¾. Corn, bag lots, No. 3, $1.95@2.08 bu. Oats, standard, white, 92c. Rye, nearby, $1.60@1.70 bu.

Hay.—No. 1 timothy, $44@45c ton; do., standard, $44@44.50 ton; light clover, mixed, $41@43 ton. Clover, mixed, $39@42. Clover clear, $35@37 ton. Tangled rye straw, $12@$14.50. Wheat straw, $10@11.50 ton. Oat straw, $12@14 ton.

Mill Feeds.—Winter wheat bran, $63 ton; brown middlings, $63 ton; white middlings, $73 ton.

NEW YORK PRODUCE

New York City, August 18, 1919.

Butter.—firm; receipts, 6,220 tubs; creamery, higher than extras, 56@56½c; creamery extras, 92 score, 55½c; firsts, 52½@55c; packing stock, current make No. 2, 46c.

Eggs.—Steady; receipts, 9,083 cases; fresh-gathered extras, 54@55c; extra firsts, 51@53c; firsts, 47@50c; state, Pennsylvania and nearby western hennery whites, fine to fancy, 66@68c; do., ordinary to prime, 55@66c; state, Pennsylvania and nearby hennery browns, 58@62c; do., gathered browns and mixed colors, 53@56c.

Cheese.—Easy; receipts, 4,070 boxes; state, whole-milk flats, current make specials, 30½@31c; do., average run, 29½@30c; state, whole-milk twins, current make specials, 31¼@31¾c; do., average run, 30@30¾c.

Live Poultry.—Easy; receipts; chickens, 38c@40c; fowls, 36c; old roosters, 23c; turkeys, 25@30c.

Dressed Poultry.—Steady; broilers, 30@46c; chickens, 36@40c; fowls, 25@40c; old roosters, 20@25c; turkeys, 40@49c.

Vegetables.—Potatoes, Long Island, $5.50@6.25 per 165-lb. bag; Jersey No. 1, $5.50@6 bag; No. 2, $2.50@3 bag. Beans, green, $1@3 basket; do., wax, $1.50@3 basket. Beets, $1.50@2.50 per 100 bunches. Carrots, $1@2 per 100 bunches. Cabbage, $4@8 per 100. Lettuce, 50c@$2 basket. Tomatoes, No. 1, $1@2.25 box; culls, 50@75c.

Fruit.—Apples, $1@3.25 basket. Peaches, $2@4 crate; Jersey, $1.50@3.25 crate. Blackberries, 15@22c quart. Huckleberries, 10@23c quart. Muskmelons, $1@1.50 crate.

PHILADELPHIA LIVE STOCK

Philadelphia, Pa., August 18, 1919.

Receipts of live stock for week ending August 16 were as follows:

	Beef Cattle	Sheep and Lambs	Hogs
Total for Week ...	1,426	4,259	4,345
Previous Week ...	1,924	7,862	2,480

Calves.—Receipts of calves last week were 1,652 head against 1,338 head week previous.

Beef Cattle.—The market was weak and prices of steers and cows were reduced, due to a slow demand and easier western advices. Calves of fine quality were firm and higher, but supplies were mostly of medium and under grades, which were quiet and unchanged.

Steers, good to choice, $15.50@16.50; do., fair to good, $14@15.50; common to fair, $12.50@13.50; cows, fat, per lb., good to choice, corn fed, 9@11c; fair to good, 7@9c; do., common to fair, 5@7c; bologna cows, 4½@5½c; calves, extra choice, $22.50@23.50; fair to good, $18@20; common, $12@15; heavy, $7@10.50; Tennessee, choice, $18@19; other southern, $8.50@12.50.

Sheep and Lambs.—Receipts were light and the market for both sheep and lambs ruled firm. Prices of the latter were slightly higher.

Sheared weathers extra, $11@11.50; good to choice, $9.50@10.50; medium, $7.50@8.50; common, $4@5; ewes, fat, heavy, $8.50@9.50; spring lambs, choice, $18.50@19.25; medium, $15@17; do., culls and common, $10@$12.

Hogs.—The market was dull and lower, due to more liberal offerings, a slow demand and bearish western advices. Quotations for best westerns, $23@23.50; Pennsylvania and Maryland, $22.

City Dressed Stock.—Hogs sold slowly and the market was weak and lower. Calves were in fair request and steady. Other descriptions were in fair request and values generally were well maintained. Quotations: Steers, 20@27c; heifers, 20@24c; cows, $13@19c; city dressed, choice, 29@31c; country dressed 24@26c; sheep, 20@23c; lambs, spring, 31@33c; hogs, 30c.

PHILADELPHIA HAY AND GRAIN

Philadelphia, Pa., August 18, 1919.

Baled Hay and Straw.—Receipts, 24 tons of hay. Quiet but firm. Timothy hay, according to location; No. 1, nominal; No. 2, $36@37; No. 3, $32@33. Clover-mixed hay, light mixed, $36@37; lower grades, $31@35. Straw, No. 1 straight rye, $13.50@14; No. 2, do., $12.5013;; No. 1 tangled rye, $13@13.50; No. 2, do., $12@12.50; No. 1 wheat straw, $12@$12.50; No. 2, do., $11@11.50; No. 1 oat straw, $12@$12.50; No. 2, $11@11.50.

Bran.—In small supply and quiet at quoted rates. Car lots, including sacks: Soft winter bran in 100-lb. sacks, per ton, $49@50; spring bran in 110-lb. sacks, per ton, $48@49.

Wheat.—No. 1 Red Winter, $2.39; No. 2, $2.36; No. 1 garlicky, $2.37; do., No. 2, $2.34.

Corn.—Yellow, in car lots, $2.12@2.15.

Oats.—No. 2 white, 90@90½c; No. 3, 89@89½c.

NEW YORK HAY AND GRAIN

New York, August 18, 1919.

Feed.—There was very little doing in the way of new business at the close of the week, buyers still looking on prices as too high, despite slight reductions during the week, and taking only such lots as they need for current wants. New crop supplies are not expected to be available for several weeks yet.

Quotations: City feed, bran, $48; middlings, $58 in 100-pound sacks; red dog, $69, nominal, in 100-pound sacks; Western spring bran, $48@49; standard, middlings, $60; flour middlings, $66; red dog, $70@72, all in 100-pound sacks, 30-day shipment. Oat feed, $31@32; rye middlings, $48; white hominy feed, nominal, all in 100 pound sacks. Cottonseed oil meal, nominal; linseed oil meal, nominal, in 100-pound sacks.

Hay and Straw.—Offerings are fairly liberal at all harbor points, demand is slow, buyers demanding concessions and market is weak and tone lower, especially on small baled hay. Rye and oat straw scarce and firm.

Hay.—No. 1 large bales, $45@46 ton; No. 2, $43@44 ton; No. 3, $40@42; shipping, $36@38 ton. Fancy light clover mixed, $42@43 ton. Clover, No. 1 mixed, $39@40.

Straw.—Per ton, No. 1 rye, $15@16; No. 1 oat, $12@13.

Wheat.—No. 2 red, $2.37½; No. 2 hard winter, $2.37½.

Corn.—No. 2 yellow, $2.14; No. 3 yellow, $2.13.

Oats.—No. 2 white, 87c.

Rye.—Export, $1.66.

PHILADELPHIA DAIRY MARKET

Philadelphia, August 18, 1919.

Butter.—Receipts, 1,401 tubs. As usual on Saturday, the Produce Exchange was closed and there was little wholesale trading. Prices were nominally unchanged. Fresh solid-packed creamery, extra, 56c high-scoring goods, 57@59c, the latter for jobbing sales; extra firsts, 55@55½c; firsts, 52@54c; seconds, 50@51c; thirds, 47@49c; sweet creamery, choice and fancy, 58@60c; do., fair to good, 53@57c; ladle-packed, as to quality, 47@59c; packing stock, 45@46c; fancy brands of nearby prints jobbing at 61@63c; good to choice, 56@60c; fair, 51@54c.

Cheese dull and weak. Quotations: New York and Wisconsin flats, current make 32½@33c; specials higher; fair to good, 31@32c; jobbing sales of fancy goods, 34@35c.

NEW YORK MILK MARKET

New York City, August 18, 1919.

Business was not brisk last week and altho arrivals showed a decrease, surplus was fairly heavy. The August rate for 3 per cent milk in 200-mile zone is $3.13 per 100 lbs.; the 3.06 per cent milk is $3.37, and the 4 per cent is $3.53.

Receipts of milk and cream in 40-quart cans for the week ending August 16, 1919, were as follows:

Railroads.	Milk	Cream
Erie	40,727	4,310
Susquehanna	6,035	89
West Shore	14,302	2,114
Lackawanna	59,110	3,272
N. Y. Cent. (long haul)	148,371	3,966
Ontario	44,675	1,986
Lehigh Valley	47,547	1,618
New Haven	6,660	72
Pennsylvania	12,141	472
Other Sources	6,300	200
Totals	385,859	18,099
Same week last year...	412,419	20,222

WOOL MARKETS

The Boston "Commercial Bulletin" of August 16 says: "The market has shown signs of increasing animation this week and prices are very firm on all grades. The strength shown in the London auctions with poor wools being offered seems to have been reflected in this market.

"Manufacturers are finding a strong demand for goods, but are still selling discreetly beyond their present commitments and in most cases are allotting goods for the light-weight season more or less in proportion to previous purchases. Little wool has been bought in the West this week."

Ohio and Pennsylvania Fleeces.—Delaine washed, 88@90c; delaine unwashed, 82@86c; fine unwashed, 62@63c; ½-blood combing, 80@81c; ⅜-blood combing, 71@73c.

Michigan and New York Fleeces.—Fine unwashed, 59@60c; delaine unwashed, 78@82c; ½-blood unwashed, 75@78c; ⅜-blood unwashed, 70@71c.

Wisconsin, Missouri and Average New England.—Half-blood, 72@75c; ⅜-blood, 68@70c; ¼-blood, 64@65c.

Virginia, Unwashed and Similar.—Half-blood unwashed, 81@82c; ⅜-blood unwashed, 73@75c.

TOBACCO MARKET

Pennsylvania tobacco fields have fared better than those of many other sections, as shown by the relatively healthy and advanced condition of crop. After weeks of dry weather and more or less injury by delayed cultivation the product is now practically free from weeds and is making up lost time in growth. Many areas have been topped, from which time development will be rapid. A leading event in tobacco circles was the strike of some 14,000 cigarmakers in Lancaster and other cities, and the indication that the strike may spread to other factories of which there are a total of about 1,200 in the district. No sales of tobacco were reported during the week, the market situation being largely that of watchful waiting pending the outcome of the new crop which at best will be short, owing to the decreased acreage. In Ohio the crop outlook is not promising, owing to continued drought. Not since the crop was transplanted has there been sufficient rainfall and unless rains come in a short time, results will be seriously affected. In Wisconsin copious rains have greatly improved the outlook and there has been unusual freedom from insects except the tobacco worm, which is a bothersome but wholly controllable pest. In the Connecticut Valley, where the crop is generally "shade grown" (under canvas), the product is being harvested and is rated better than usual and remarkably free from blemishes.

ABOUT SANITARY FLOORS

Such as are described in Pennsylvania Farmer of July 12. I want to tell my experience with keeping floors in order. Twenty years ago we came to this home—a big, old-fashioned house built in 1796, and well built, too, for its massive walls were intact, with no cracks of any consequence either inside or out. And the floors were made of our native yellow pine and oak.

We bought carpets, as was then the fashion, to cover the floors clear to the walls in those 16 by 15 rooms. And then when warm weather came I found that moths threatened my carpets, so without hesitating I took off a breadth and made the carpets smaller all the way around. Then I painted every floor and all the closet floors. I first made the floors clean, and neatly filled all the cracks. As I prefer light oak shade because it shows dust the least, I first put on a straw color; then if I wanted a floor grained I thinned burnt sienna with turpentine and brushed it on one board at a time, and grained that quickly. I am fortunate enough to have a good set of graining tools.

When the paint is dry, I varnish with a regular hard floor varnish of light oak color. I use two splendid kinds of such varnish. One of these I have used for years and can rely absolutely on it as almost impervious to heel marks for a long time.

We have a large hall, common in such old houses as ours, in which the wood of the stair railings and the dozen doors that open into the hall is black walnut. But the main woodwork has been painted white. The stair floors are done in light oak shade. When these were finished last time, I wanted them stippled very nicely, so we had a regular painter come out and do it, then we varnished them with the best grade of saddlers' or carriage varnish. They were done four years ago and are very nice yet.

It is great to be able to wield a paint brush. We keep one handy to use at any time by standing it in a pail and keeping the brush well covered with water all the time. When we find a little spare time we paint a tub here and a barrel there. Moss green is my favorite color for the outdoor things. Our place is named "Green Dale," so the color has some connection, you see. A couple of old stumps sticking upon the lawn got their dose, also the hitching post, the flower cans, and the cellar things generally. It is surprising how much "smarter" a wise use of paint will make an old place look.—Mrs. Lloyd Shuman, Juniata Co., Pa.

KEEP COOL

Extreme heat can be mitigated by a sane diet, sane clothing, sane living and thinking. Eat less, get away from meats and fried foods, and choose more vegetables, fruits and salads. Drink milk, buttermilk, fruit juices or other cooling drinks.

Wear loose clothing. White is cooler than the same fabric in colors. White hose are much more comfortable for every-day wear, and if changed daily—as they should be, no matter what the color—the washing is not burdensome. Spread on the grass to dry, they are more easily kept white.

Bathe daily, or better, morning and night. Even a sponge bath in the morning is wonderfully refreshing, and at night it is the best sudorific. Bathe not only to be clean, but to be cool. The temperature of the body can be surprisingly reduced by this simple means. Besides, keeping the pores of the skin open helps nature in her evaporation process of relief.

Open the house at sunset and close the blinds during the heat of the day if you really wish the room cool, altho it is wiser in the end to get out under the trees and where the air will circulate freely than to remain indoors. Sheets wrung out of cold water and hung before a window or where the air will circulate freely cool the room materially thru evaporation. Above all, don't worry, especially about the weather. "Keep cool" mentally if you would keep cool physically.—Bessie L. Putnam.

REMAKING A SUIT

I have a navy blue serge suit with short cutaway coat very elaborately braided around the waist with black embroidery and braid. The skirt is narrow with a wide fold, but there is a burned hole directly in the middle of the front breadth. It is a three-piece skirt rather tight at the top. Could your "Make-Over Lady" tell me how to make a one-piece dress of this suit? The lining is very nice white-striped satin. What would she suggest doing with that?—E. W. P., N. Y.

I think your blue suit would look fine with a black satin panel both back and front, using the best part of the blue skirt for the side portions. I fancy that you will find on ripping it up that you will have to use the folds again, as the material underneath will look too new to be used in connection with the rest of the suit. I should let the satin panels extend quite up to the braided waist line in the back, and to the neck in front, thus giving a princess effect.

Cut away the coat portions, covered thus by the satin, stitch the sides of the panels onto the blue serge except on the cutaway front, which should overlap the satin. These panels will thus make it possible to discard the old skirt front containing the burned place. And the tightness at the waist will be relieved by combining the materials in this way.

Tiny, simulated pointed pockets could be used on the coatee-effect portion (your skirt and coat will of course be stitched together, making a one-piece dress, but having the effect of a little coat). I have seen something similar, with the coatee effect in black satin topping a remodeled black cloth skirt.

The best parts of the white satin lining could be used for making collar and cuffs. A small white lace vestee could be introduced across the satin at the bust of the dress. Thus remodeled, your one-piece dress from your old blue suit should make a very attractive-looking garment.—The Make-Over Lady.

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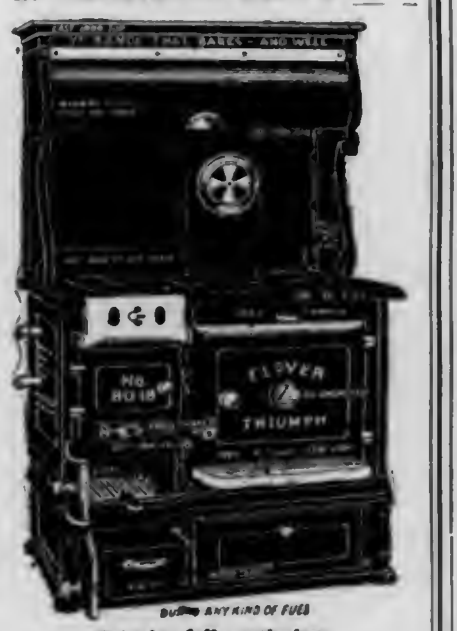

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Managing Sows And Litters

Methods of Care and Feeding That Have Given Large Litters of Strong, Quick-Maturing Hogs

By F. A. HAYS, DEL. EXPT. STATION

Successful hog raising depends in a very large degree upon the management of the sows before farrowing, during the farrowing season, and upon the feeding and method of handling the sows and their pigs up to weaning time, at 60 to 75 days.

It is a well recognized fact that the ration fed the sow when pregnant may do much or little for the good of her pigs after birth. In other words, if the young pig comes into the world in an under-nourished condition, he will probably never be able to become the kind of hog that his inheritance has made possible. This is not economical, because the cheapest growth during a pig's life is that which he makes in utero, or while carried by his mother. At this time he makes even greater gains than those made during the suckling period.

A ration for the pregnant sow should be complete and adequate in every way. It should furnish an abundance of protein of the right quality. Tankage and skim milk or buttermilk are unsurpassed sources of protein. Next to these we might consider soy bean forage, alfalfa forage, rape forage, and clover forage. These pasture crops are not available during the winter season, and in consequence the farmer must rely on concentrates. Such feeds as linseed oil meal, cotton-seed meal, soy bean meal, gluten feed, or middlings and bran cannot be considered fully satisfactory because no plant protein has yet been tested that will equal the two animal proteins, tankage and milk, in swine nutrition. The solution of the protein problem, therefore, lies in the liberal use of tankage and milk in some form. The Delaware Experiment Station has had best results by feeding tankage in a self-feeder to pregnant sows, and often unsatisfactory results from mixing tankage with other feeds. Sows will not overeat on tankage and it will not be wasted if the feeders are under cover.

The carbohydrates or starchy part of the ration must be limited because a full feed will cause pregnant sows to become too fat and inactive. This can be done by feeding limited amounts of corn, hominy feed, etc. These two feeds are basic and should constitute the chief source of carbohydrates. To keep the sows satisfied they should be given access to alfalfa or soy bean hay in racks. There is no question but that a ration made up of corn and tankage furnishes all necessary nutrients, but access to hay will give the sows a chance to distend their digestive organs, overcome undue restlessness and rooting and at the same time furnish protein and considerable ash.

The mineral constituents in the ration play a very important function. They are in a large measure responsible for the proper development of the skeleton, and hence the size of pigs at birth is in no small way dependent upon the ash supplied. Either tankage or milk furnish ash adequate for the needs. When protein is furnished by some plant protein, lime is likely to be deficient. This can easily be supplied from a small box in the form of ground rock or air-slacked lime. No harm can come by giving the sows a chance at such minerals as sulphur, rock phosphate, charcoal, bone ash, salt, etc., fed separately, but it is a surprising fact that she will probably eat very little of these. The mineral question is thus very easily solved.

A few days previous to the farrowing date the sows should be placed alone in a farrowing pen. At this time her feed should be somewhat reduced and the use of such bulky feed as bran is often advisable. The carbohydrates should be cut down, but this is not necessary with the proteins. She will be restless and eat very little for a few hours before farrowing and should have plenty of good clean water to drink.

A sow should have constant attention while the pigs are being born, but not disturbed unless she needs assistance. It is very important at this stage to see that the bedding is properly distributed and dry, that the afterbirth is removed, and that the pigs soon get to nurse. After the pigs have nursed they will be much more able to move about to avoid being crushed.

No feed should be given except tempered water for a period of twenty-four hours. The first feed may consist of a light slop or bran and middlings, with a handful of tankage. On the third and fourth days some of the regular ration may be used, and by the sixth or seventh day the sows may be fed a full feed of the same kind as fed before farrowing. Best results have been secured at the Delaware Station during this period by self-feeding the sows on corn and tankage, or hominy feed and tankage, each in self-feeder. The full feed should continue until about five days before weaning or up to the seventieth day.

With this ration the pigs get a maximum amount of milk from their dams and soon begin to eat grain from the feeder. Five days before weaning the boars are castrated and all are given the simultaneous treatment against cholera. The self-feeder is taken from the sows but not from the pigs, and the sow is fed a very light bulky ration of bran, oats and middling and dried off. On the seventy-fifth day the pigs are dipped to free them from lice and placed on forage crops with access to self-feeder. The sows are turned on forage as soon as their milk supply is dried up and fed grain as recommended befoe farrowing, so that they are gaining weight when rebred. Such a system has produced large litters and strong pigs that go to market early at a substantial profit.

The horse often is not to blame for the runaway. Sometimes it's the fault of the driver, and sometimes it's the neglect of the man who should be sure the harness is in good repair and properly adjusted before starting out.

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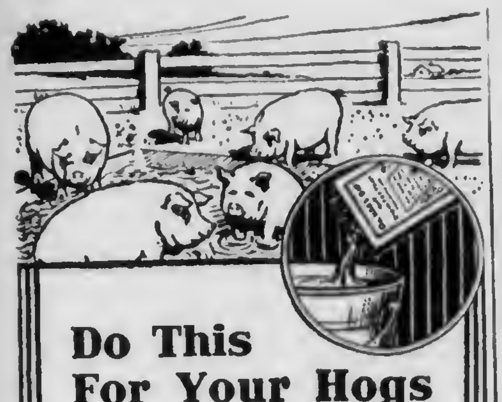

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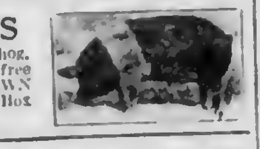

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Veterinary

Conducted by W. C. Fair, V. S.

Advice thru this department is free to our subscribers. Each communication should state history and symptoms of the case in full; also the name and address of writer. Initials only will be published. We cannot make reply by mail. This is one of the most valuable columns of the paper and we invite readers to make use of it. Clippings from this column, when properly preserved and classified, make one of the most valuable medical symposiums a farmer-stockman can obtain.

Sweeny.—I am anxious to know what causes sweeny. Will you also give me a remedy? J. B. D., Elkton, Md.—Atrophy of the muscles frequently follow a sprain or injury to the parts, a choking of circulation to the tissues, also lack of muscular exercise has a tendency to be followed by atrophy, which is commonly termed "sweeny." Hand rubbing, counter irritation, with stimulating liniment and the application of mild blisters are the common remedies used in the treatment of sweeny.

Sore Shoulder.—We have a young mare with small sore on shoulder which home remedies fail to heal. I first applied cold water, commercial gall cure, boric acid, bluestone, turpentine, but the shoulder remains raw. H. C., Waymart, Pa.—Dissolve ½ pound acetate of lead, 3 ounces sulphate of zinc, 3 ounces tannic acid in one gallon of water and wet sore five times a day. It is not an easy task to heal sore shoulder and keep on working the horse.

Mange.—I have a horse that has some kind of skin disease which started about one year ago. At first it bothered him little, but now he is in agony. We have two other horses and a mule that are showing similar symptoms. H. D. F., Plumsteadville, Pa.—A fairly good home remedy is made by mixing 1 part sulphur, ½ a part carbonate of potash and 4 parts lard. Apply this ointment twice a week. A two-percent solution of liquor cresolus compositus (U. S. P.) is a very good watery solution and it should be applied once or twice daily. Give each of the horses a dessertspoonful of Fowler's solution in feed or in drinking water twice a day. Your stable should be washed with fresh-made lime wash.

Puffs in Bull's Hock Joint.—Have a yearling stock bull that has puffs on his hind legs at the knee joints; they are located on both sides of joint and are not very soft. E. R., Bangor, Pa.—Clip hair off bunches and apply red iodide of mercury and six parts fresh lard every ten days. Painting bunches daily with tincture of iodine is a fairly good remedy, but you will find it rather tedious work to reduce such bunches, and, I might add, they can only be reduced by repeated applications of what I have prescribed.

Bunch Under Abdomen.—I recently purchased a young cow. She has bunch in front of udder, under belly, but so far as I can tell it does not interfere with her milk flow. What had I better apply? G. R., McConnelsburg, Pa.—Apply 1 part iodine and 9 parts fresh lard three times a week. Her ailment is local and will never harm her.

Teat Stricture.—I have a 2-year-old heifer that freshened in March; milked well up to two weeks ago. Since then I have been obliged to use milking tube to draw off milk. Her milk seems to be all right, but I don't use it. What is the remedy? W. E. O., No. Warren, Pa.—The teat canal should be slit open, but it will not be necessary to go high up; most of the trouble is usually near the end of teat. Remember, you need a suitable instrument to do this work and it should be cut on four sides. Your veterinarian will not demand large fee to do this work.

Pigs Cough.—My pigs eat well, but they don't seem to grow as rapidly as they should. Nearly all of them cough while eating middlings and whey. One of them died and two more are sick. L. K., Smithport, Pa.—Mix equal parts powdered licorice and powdered gential and give some in each feed. A teaspoonful is dose enough for a 100-pound hog.

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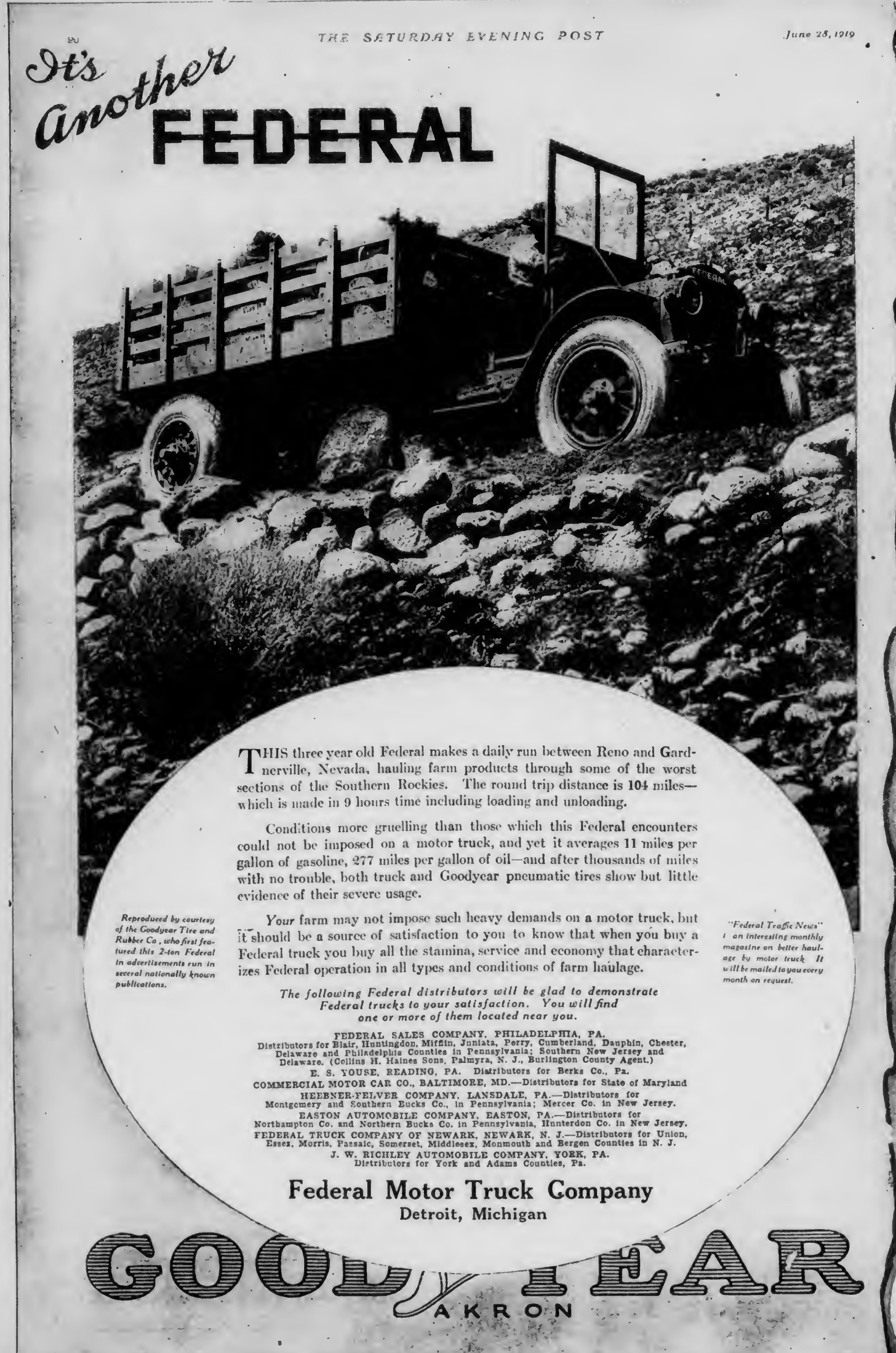

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Late Summer Seeding of Alfalfa

How And Why 1,000 Acres Have Been Planted by Sussex County, New Jersey, Farmers

Sussex County, New Jersey, is one of the most intensive dairying sections of the United States. It harbors more than one-sixth of the total number of cows in the state and is commonly known as "The County that put Dairying on the Map in New Jersey." Immediately it becomes obvious why the farmers in that particular county are planting so much alfalfa.

Relative Yields: On Left Grown from Northwest Seed; on Right, Southern Seed

A few years ago one could have traveled the roads and by-roads of this county in a futile search for a field of alfalfa. At that time few farmers had heard or read of alfalfa and most of them regarded it as a purely western product, acclimated and adapted for that particular section of the country. They also were very skeptical relative to the claims made for alfalfa, and looked upon this movement for more alfalfa as a sort of propaganda launched by their western brothers whom they thought were utterly unqualified to dictate farm policies in the east.

So in promoting the movement for more alfalfa, which has converted so many "clover farmers" to the growing of great acreages of the sister legume, the promotor's path was strewn with rail fences and barbed wire instead of the proverbial roses. When a farmer was approached by the county agent who solicited his co-operation by planting a field of alfalfa for practical demonstration purposes, Mr. Farmer dealt with him as he would with some feed agent who was trying to sell him something he didn't want. The general attitude of the farmers seemed to be "I'm from Missouri," "Let George do it," "Clover is good enough for me." But people in Sussex County are no different from those in other places and after a while a few progressive men were located who were willing to serve as pioneers.

Thus began the alfalfa campaign in Sussex County. The farmers eagerly awaited the following season to observe the results of the alfalfa demonstrations. When the time arrived the doubters were convinced that alfalfa could be cut three times a season. Later, they were also convinced that it did contain much more protein than clover, that it did lower the dairy feed bill, that it was the most economical milk producer and also the best forage for cows, horses, pigs, chickens, sheep and goats. In fact, they indorsed all the claims made for it and today the Sussex County farmers need no urging to plant alfalfa. They are eager for information concerning its every phase of culture. They hail it as the dairymen's trump card in the economical production of milk. Concrete proof of this is evident by the fact that over 1,000 acres of alfalfa will be planted in Sussex County before September first.

Late summer seeding has become very popular. It is probably preferred by the majority of growers because it not only enables them to secure another crop from the same land the same year, but it does away with the necessity of clipping in order to keep down the weeds. The commonest cause of failure in spring alfalfa is weeds; but this seldom gives trouble in a late summer seeding, as the summer weed crop has practically been destroyed by that time. Late summer seeding is also popular because of the special opportunity the season offers. It is not necessary for the farmer to disarrange his fall work in order to plant alfalfa. The time for planting comes after the summer harvest of winter grains and before the fall harvest.

Alfalfa should be sown by August 15, but some seedings in this county have been planted as late as September 1 and made enough growth before the cold weather to enable them to withstand the winter. These instances are exceptions and such successes are made possible only by extremely favorable weather and a late fall. The great majority of our farmers have their seedings in before August 30. It does not pay to take chances on seedings later than this; there is too much money, time and labor invested in a field of alfalfa. The time has arrived when the farmer must eliminate every possible element of chance and invest in as many "sure things" as possible.

Soil Requirements

In order to grow alfalfa successfully, farmers have found that they must first familiarize themselves with the requirements of this haughty legume. It is said that alfalfa is very particular as to the kind of soil and the fertility of it. But in Sussex County we have learned from actual experience that the kind of soil or its texture is not so important, provided there is plenty of plant food available. Fertilizers or manure may

Alfalfa in Sussex Co., N. J., Seeded in Later Summer

Just Before the First Cutting Sown in Late Summer

be used to advantage on most soils. Where manure is available it should have the preference over commercial fertilizers. The general impression among most farmers seems to be that alfalfa needs a deep soil. No doubt a deep soil is preferable, but it has not proved absolutely necessary.

Alfalfa growers in Sussex County have proven beyond question that alfalfa can and will grow on shallow soils. In fact, some of the most successful stands of alfalfa have flourished on slate hills and ridges where most grasses and weeds had hitherto refused to grow. On some of these fields there is but a thin coating of soil over the great stone ledges beneath, yet the alfalfa thrived and seemed to prefer places of this nature. It also seems to thrive in the up-lands and consequently most of our alfalfa is planted on hills or slopes. Alfalfa demands a well-drained soil and absolutely refuses to grow on wet or seepy ground. "Alfalfa will not grow with wet feet," is an expression generally used to impress upon a prospective grower the necessity of having a well drained soil.

Care in the selection of seed is a most important factor. Seed grown north of Kansas and Nebraska has proven far superior to that grown elsewhere. Montana seed is particularly desirable and has proven reliable in all alfalfa seedings in Sussex County. Undesirable seed has caused many failures. That grown in the southwestern states will not endure our cold winters, while imported seed seems to be short lived and unproductive. Such seeds are cheap, fine looking and abundant but should not be sown in New Jersey or sections north of there. Northwestern-grown seed is essential, because it has been acclimated to the severe winters. In buying seed, deal only with reliable houses.

Thoro preparation of the seed bed is also essential for best results. The tender young alfalfa plants require the soil to be in excellent tilth at planting time. The seed bed should be fine on top but thoroly settled. The young tap root of the plant strikes down immediately and is apt to be seriously injured if it encounters a layer of loose dry soil at the bottom of an old furrow. As a general rule several weeks are required for plowed land to settle sufficiently for alfalfa seeding. It is sufficient, however, with many soils that they be disked instead of plowed. Many farmers prefer this method and the results seem to justify their practice. Less time is required for the disked land to settle and the operation is much less expensive than plowing. It is important that the preparation be uniformly good as the poorly prepared spots are apt to be barren. These bare places form centers from which weeds may spread and ultimately destroy the whole stand.

Alfalfa exhausts the lime in the soil much more quickly and more completely than any of the other forage crops. For this reason it is imperative that the soil have an abundant and an available supply of lime. No farmer should undertake to grow alfalfa without first knowing the lime requirement of his field. This can be readily obtained by sending a sample of soil to his farm bureau or state agricultural college. There is much difference of opinion as to the form of lime to use. Burned lime, hydrated lime and pulverized limestone are all excellent and will give practically the same results if applied in equivalent amounts. Sussex County farmers prefer a high grade pulverized lime stone. It is much easier to handle than either the burned or hydrated lime, it does not leach in the soil but gradually becomes available in sufficient time and quantities to neutralize the acids in the soil. It will also remain in the ground longer, requiring fewer applications, but obtaining the same results.

Inoculation

Alfalfa requires large amounts of nitrogen. If the soil is rich in available nitrogen the alfalfa plants will acquire a sufficient amount for good growth. In ordinary soil, however, alfalfa is not able to obtain its nitrogen from the soil but must have the aid of certain bacteria that fix free nitrogen from the air in such form that it can be utilized by the plant. Root nodules are found abundantly on the plant during most of the growing season. These nodules are filled with countless numbers of organisms which are capable of assimilating atmospheric nitrogen and fixing it in an available form in the soil for the use of the alfalfa plant.

In order to get these bacteria into the soil the field must be inoculated with them. This can be accomplished in several ways: First, broadcasting to the acre 500 to 1,000 pounds of soil from an old alfalfa field, makes an effective method of inoculation and has been generally practiced. The virility of the organisms is greatly weakened by exposure to the sun, however, so it is important to have a harrow immediately follow the man sowing the inoculation.

A method that is recommended by the New Jersey Agricultural College has become quite popular with farmers in this section. It is termed the "glue method" and consists of inoculating the seed instead of the field. A bushel of seed is moistened with a thin glue which is made by dissolving a ten cent bottle of glue in one and one-half quarts of warm water. A peck of finely sifted soil from an old alfalfa field is slowly and thoroly stirred into the seed until every seed has a thin coating of soil. The glue water serves to hold the soil to the seed. A dilute molasses may be used in place of glue. This method requires much less time than treating the field and answers the purpose just as effectively.

The third method consists of inoculating the seed with a liquid commercial culture. But owing to the unreliability of these cultures it is not wise to depend upon them unless you are positive that they are genuine.

From 20 to 25 pounds of seed per acre has been found to give the best results. It is policy to be on the safe side by sowing 25 pounds rather than 20. The manner of seeding varies somewhat but everyone agrees that it is necessary for the seed to be covered and not left on the surface of the ground as is sometimes done with grasses and clover. Alfalfa may be planted with a drill or sown broadcast. When sown by the latter method, it is policy to use at least 25 pounds per acre.

Alfalfa 28 Days After First Cutting. Sown in August

Failures in obtaining a stand of alfalfa often result from neglect of supplying the lime requirement in soil, proper inoculation of the field or seed or from indifference as to the source of seed. All these precautions are necessary in order to obtain the best results, but the three just mentioned appear absolutely essential.

Undoubtedly many farmers become discouraged after reading so many precautions. It is true that we must give alfalfa more attention than the average crop, but once you are successful it will require the least care and attention of any crop. It will grow for a period of years without reseeding and during normal seasons will reward you with three crops of a rich protein legume.

Sussex County is by no means ideally located for the growth of alfalfa. The topography of the country and the nature of the soil do not particularly lend encouragement to its planting. But Sussex County farmers and dairymen needed alfalfa and by familiarizing themselves with the peculiarities of this legume and observing the special requirements of it, they have attained a high degree of efficiency in its culture. The following is quoted from a Sussex County farmer who was one of the alfalfa pioneers and also a very successful alfalfa grower. He gives his experience as follows:

"It is now eight years since we first tackled the alfalfa proposition. Several times we almost gave up in despair, but each time we decided to stick and now, after eight years of experience, we can look back over the past and say that, on the whole, it has been the most profitable crop we have been growing.

"At present we have two fields, of about eight acres each, of as good stands of alfalfa as you will find anywhere, each of which in the start seemed doomed to failure.

"After we planted the first piece, a year ago last August, we had considerable dry weather and it did not have much of a top to go thru the winter with. When it started up in the spring it looked fairly good at a distance but upon closer examination, it was found that horse sorrel was forming that nice green mat over the field. We were depending on this field for our main supply of alfalfa, so hardly knew what to do. We finally decided to crop it that summer and see what it might amount to another spring. It has turned out to be as good a stand as one could wish for and is practically free of horse sorrel.

"The other piece, planted last August, had a still poorer start when winter set in, and when spring came we hardly thought it worth leaving as it seemed thin all over. Around the edge there was a strip from ten to twenty feet wide that was as bare as a board and also about an acre in one corner. As the season advanced and the alfalfa began to shoot up, it became a question whether to plow it up or not. We concluded not to plow it up. We harrowed over those bare spots and sowed some more seed and now what seemed a failure is a big success.

"The first cutting from these two fields averaged about two tons per acre and both will soon be due to cut again. Alfalfa pays, and pays big."—H. E. Baldinger, Sussex Co., N. J.

Nature's Soil Bank

It is not unusual to speak of the soil as a "bank" containing fertility elements against which the farmer draws checks each season in the form of growing crops. Such an analogy possesses a certain amount of truth, but it is only fair to add that Nature's soil bank does business in an entirely different way from any banking house to which one is in the habit of intrusting the care of one's money. If one has a thousand dollars in the Farmer City National Band one may walk up to the cashier's window any day, present a check that is properly drawn and receive the full amount one has on deposit. But if one has on deposit in each surface acre in Nature's soil bank—say, 4,200 pounds of nitrogen, 1,200 pounds of phosporus and 35,000 pounds of potassium he may not check it out in one season or a dozen or even in fifty. Nature is willing to release not more than about 1 per cent of the total phosphorus each year, about 2 per cent of the total nitrogen and about ¼ of 1 per cent of the total potassium. And furthermore, Nature demands that one work hard, thru cultivation and otherwise, to unlock these amounts from the total deposits of fertility elements and render them available for plant food. All this being the case it follows that Nature begins to slow up on production long before fertility elements in the soil bank approach exhaustion.

This condition can be illustrated most easily, perhaps, in the case of phosphorus, since this is a fertility element which, under most systems of farming, tends to decrease quite slowly in a soil from year to year. We will suppose that the land has been cropped continuously for half a century or more, without attention being given to its phosphorus content. There come a few seasons when the yield shows a mysterious falling off, or perhaps the corn fails to harden as it should under conditions which prevail. A soil analysis shows that each surface acre holds about 800 pounds of phosphorus. Inasmuch as only about 11½ pounds of phosphorus is needed to mature a 50-bushel crop of corn there appears to be enough of this element on deposit in the soil bank to mature 70 crops of this size. Bearing in mind, however, that Nature's banking methods release only about 1 per cent of the total phosphorus deposit each year—and then under the most favorable conditions—it is seen that tho there be 800 pounds of this element in the surface soil of each acre only about 8 pounds can be made available with which to mature the season's corn crop. This amount of phosphorus will grow approximately 35 bushels to the acre. There are plenty of funds in the bank, if Nature would permit their withdrawal as needed. But it is a wise Providence which has ordered things as they are. Otherwise production would go on at high levels and then stop suddenly when any of the essential elements should become exhausted. As it is Nature flings out a warning in the way of reduced yields giving notice that tho there are still funds on deposit the amount is growing low.

The way to insure sufficient phosphorus to grow bumper crops of corn year after year is to make sure that there is sufficient phosphorus on deposit in the soil bank to provide enough of this element for at least 100 crops of bumper size. With this ample deposit Nature can be induced thru proper soil preparation and cultivation to honor a check of 1 per cent of the total amount each season. This will insure enough of this element to ripen a crop of bumper size.

Keep a Lookout For It

Have you seen potato wart? Potato wart has been found in Pennsylvania. It is an European disease which threatens the profitable production of the potato industry in America. The dreaded disease has established itself in only a small section of the anthracite coal region in Pennsylvania. Some of the miners' gardens were so seriously affected as to destroy the crop. Every effort is being made to restrict the disease to its present area.

This disease is caused by a fungus, which lives over in the soil from season to season. It may further be introduced into uninfested areas by the planting of diseased potatoes. The organism causes a typical "warty" outgrowth generally from the eyes. It resembles cauliflower very much in its appearnce. At first they are whitish, or about the color of the tuber. With age, they become dark brown. The size may vary from that of a pea to the size of the tuber itself, sometimes covering the whole potato.

The potato wart organism was brought into Pennsylvania in 1911 or 1912 when large quantities of European potatoes were brought to this country. The disease has been very serious in Europe for many years, some countries are unable to grow potatoes profitably. Shipments of European potatoes have been traced to many parts of Pennsylvania.

Pennsylvania ranks high as a potato growing state. Last year, we raised over 24,000,000 bushela of potatoes. The common diseases of the potato reduce the yield about six million bushels. Potato wart is thought by pathologists to be the potatoes' most serious enemy. Every farmer, gardner and citizen should help to fight potato wart. It cannot be seen on the stalks during the growing season. Therefore, everybody should watch when digging potatoes and send suspicious specimens to the Pathology Department of the Pennsylvania State College.

Impressions of French Agriculture

By an American Farmer Doughboy

The French farming country is very attractive to the eye and the idea comes to the mind of the American soldier who has been raised on a farm that "I could do something with that." The country is rolling with gentle hills and very beautiful. The land stretches away into the distance with not an isolated house in sight, tho tucked in between the hills one discovers one of the tiny, red-roofed hamlets that house the inhabitants. Often, on a wooded hill, is seen one of the stately chateaus that are the homes of the rich landowners, in olden times lords and absolute rulers of the countryside round about.

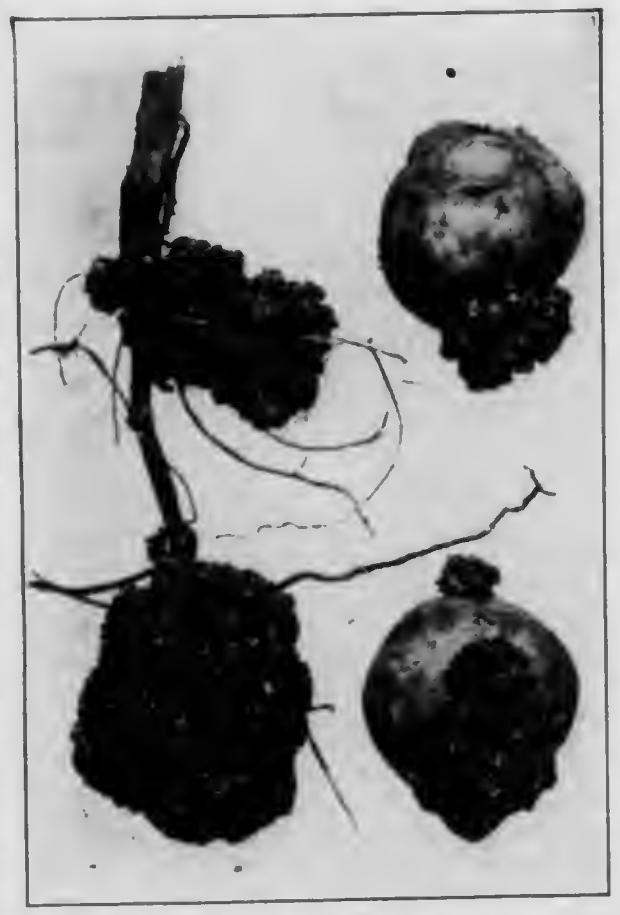
France has numerous little rivers that go rushing along on their way to join the Seine, the Rhone, the Moselle, or one of the other bigger rivers of France. There are also numerous canals. These waterways are very picturesque. A long line of poplars on either side marches along in company and one of France's wonderful white roads always winds beneath them. These little rivers and canals also have a utilitarian purpose as they supply irrigation to the meadows and fields of the valleys as well as drainage.

Perhaps because of these waterways, France has numerous meadows, small fields with a few apple or pear trees growing in them, where the cattle graze during the day. The tilled fields are also small in most cases and the monotony of large spaces is broken up by the hedges or stone walls which are used as boundaries.

There is a great deal of wooded country in France among the hills and to me this feature of the country was one of the most interesting encountered because it is something that our own country, so regardless of waste in its deforesting that our lumber problem is rapidly becoming very serious, must some day consider seriously. In France, even tho the forests or woods is privately owned, the owner cannot cut the wood as he wishes but according to the direction of the Government Forestry Service. Inspectors give instructions as to clearing and designate trees which may be felled. In this way, French forests always appear healthy and forested with no loss. All land, furthermore, that is not well adapted to farming is set out as a forest, generally of evergreens, so that it is a common thing to see square or rectangular patches of evergreen woods, the trees planted in rows, making sort of a wild park.

Small Threshing Outfits are Best for Small Farms

The soil of France is generally a clayey loam with a soft stone base. I have often wondered whether this common soft stone was of a true limestone nature or not, but was never able to find out. From appearances it is more of a poor, porous clay, but it must have some lime in it, judging from the action of water and traffic upon it when used as a road-base. This soil does not appear rich or very fertile, tho I have seen many fine crops growing on it, a fact that somewhat surprised me when I considered that the French used next to no commercial fertilizer and very, very seldom employed a rotation of crops. And I have never seen a French plow yet that turned over more than three or four inches of soil!



Showing Appearance of Potatoes Infested With the Wart Disease

The French farmer himself is never so prosperous looking as his American cousin. He goes stamping along beside his stallion, clacking his wooden shoes, or sabots, a little bent, grizzled, roughly dressed. But he is a kindly-hearted individual, very frugal and very hard-working. His wife is a competent dame, so accustomed to working beside him in the fields and sharing his daily labor that it is a habit. She also is kind, with the same frugal habits, and a splendid housewife. Frenchwomen work in the kitchen with an absence of effort that is astonishing. The children also have their daily tasks and are often seen driving the horses or cattle to the trough in the morning for water, feeding the pigs or chickens and, after breakfast, clacking away down the streets in their noisy little sabots, off to the village school with their books under their arms. During vacation days they graze the cows in the unfenced fields, or watch the sheep.

The French farmer's home is too primitive to suit the taste of the American. It is a low building of native stone, dark and looking as if it was built in the days of Noah (many of them are two or three hundred years old). Many of them are shingled with half-inch shingles fashioned also from the native stone, making the house look very dingy and damp. Nowadays, however, much use is made of a curved red tile for roofing purposes.

In one end of the house the farmer lives and in the other he houses his stock. It is a very unsanitary method, particularly as it is the custom to make a manure pile against the side of the house, beside the front door. But it makes a beautiful place for the babies to play! Yet with all of these ugly features the French home is remarkably comfortable. The living room is the kitchen where the wife does her cooking over the open hearth, tho stoves are rapidly coming into favor.

French horses are excellent animals, mostly stallions and mares, very few geldings being found in the country districts. They are heavy, powerful brutes and willing workers. The French always use a tandem instead of a team because their village streets are so narrow. The cattle are of a good average, tho no records are being kept; nor is breeding for improvement of quality or quantity being made, except in the Flanders region, where extensive dairying is carried on. Many farmers are the owners of sheep.

The French live in communities, little red-roofed villages tucked in between the hills, an old custom that originated from the need for protection from a common enemy. But it is now obsolete and a hindrance, as much time and labor is wasted in going to and from the farm, some of which are as much as three kilometres (1.8 miles) distant. They go out to their land in the country in their cumbrous, two-wheeled carts with their lunch of bread and wine and work there all day, returning at night.

The French farmer's methods are very primitive. He plows with an awkward, wooden plow, the iron share of which turns over only about four inches of soil, he carts his hay or grain on his heavy cart which does not carry an adequate load, he does his threshing with a flail, stacks his straw, as well as his hay, for want of a mow to store it in and, in general, uses methods discarded by us years ago. In short the results he obtains do not seem to correspond with the labor he expends.

Thus, French farming methods are very disappointing to the American. But it is necessary to remember that the French farmer has not had wants that have driven him to more intensive or scientific agriculture. They live simply in their little communities, have few wants beyond a little flour and meat for which they exchange their butter, milk or eggs. They make very little but, on the other hand, they stand no chance of losing anything.

(Continued to page 10)

PENNSYLVANIA FARMER
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PHILADELPHIA, PA., AUGUST 30, 1919.
VOLUME 46 NUMBER 9

Our job is to serve our readers. Whenever and wherever we can help you, write us.—The Editors.

The Hoarders

IN THE feverish search for someone to blame for the high cost of living, we hear much of the food hoarders. Every day the city press tells of stocks of butter, eggs, poultry, etc., being seized by the prosecutors. We would not excuse any one for holding food at this time merely for personal gain, but it seems pertinent to ask what cold storage plants are for. The locating of a stock of stored food is not unusual, but if these stores are to be taken over and distributed now, where will prices go next winter when production is at its lowest point? Good intentions is not a sufficient excuse for some of the fool stuff that is being done in the name of public service.

Daylight Saved

THE Daylight Saving Law passes out of existence when the clocks are turned back to normal time next October. By a two-thirds vote in both houses, Congress last week passed the repeal bill over the President's veto. This is one of the very few if not the only bill to become a law after having been vetoed the second time. Friends of the measure charge its repeal to the "browbeating tactics of a farmer lobby," still admitting that there was much opposition from labor unions, rural school authorities and numerous mothers' organizations. With a fair analysis of the benefits of the law now that the war is over, with comparison with the hindrance to full farm production at a time when all classes are clamoring for more production and lower living costs, the farmers of the country may well be proud to assume full responsibility for securing its repeal.

Conditions and Prospects

ON THE whole, the farm crops of 1919 will probably prove to give about the average yield—any increase in volume will be due to increased acreage. However, weather conditions in many sections have been sadly against the farmer. Late frosts and too much rain last spring injured crops in many localities; excessive rains in July and August caused great damage to fruits, hay and grain along the Atlantic coast, while in the Northwest—Montana and Idaho especially—they have experienced the worst drouth in a generation. In spite of all this the total amount of agricultural products will probably equal any previous year, all of which is eagerly awaited by a hungry world. Of course, it is too soon to count the profits. The crops are not all gathered, and very little, with the exception of truck crops, has been marketed. The cost of production has been great, and the difficulty of getting work done has not been small. On top of all these troubles comes the world-wide agitation for cheaper food which, whatever else it may do, will tend to bear down prices at the farm. Yet, farmers should not feel that the outlook is gloomy. Every business has been having its own troubles. It is altogether likely that conditions will generally be shaped into better form from now on and the nebulous public mind take some definite attitude towards pressing economic and social questions. Whatever else people will have to forego, they must have food, shelter and clothing and there is no likelihood of a surplus of the staples during the next year or two at least.

Farming and the 8-Hour Day

STEADILY and surely the industrial world is adopting the 8-hour day and the 44-hour week. Theoretically and mechanically it is possible to adjust every industry except farming to such a schedule. Most of them have all the year for their work and full control of all the factors entering into their operations. Not only the hours of work but prices, wages and other costs can be anticipated, set, or agreed upon. The probable output can be calculated and the selling price adjusted to cover costs and return profits. With more or less full control of these factors, wages, hours and prices are mere matters of adjustment, and production is limited only by the supply of available labor.

With farming, everything is different. In fact, the reverse is true in nearly every instance. All the operations of field production must be performed within a few months—six at most, and much of this time weather conditions prevent productive work. Yields are dependent upon the weather and the prevalence or absence of insects and diseases. While the farmer can have little or no control over these factors, he has still less over the price paid him for his products. How, then, can he compete with other industries in the matter of wages and hours? It is physically impossible for the present amount of farm labor to run the farms to capacity, and equally impossible to pay the rate of wages obtaining in other industries. Those acquainted with the situation will recognize these statements as facts, and it is idle for others to berate the farmer as unwilling to adapt himself—as was done during the day light bill fight. The only thing that will prevent actual want in this country within the next two years is a larger supply of farm labor that is willing to adapt itself to the conditions incident to the business of farming.

The President and Farming

THERE is much for the farmers of the country to consider in President Wilson's message accompanying his second veto of the daylight-saving law. His stand on that particular measure was made ineffective by the passage of the repeal over his veto, but his point of view is of general interest as reflecting his possible stand on other agricultural legislation that may arise. He expressed his present view very definitely as follows:

"The immediate and pressing need of the country is production, in all lines of industry. The disorganization and dislocation caused by the war have told nowhere so heavily as at the industrial centers—in manufacture and in the many industries to which the country and the whole world must look to supply needs which cannot be ignored or postponed.

"It is to these that the daylight-saving law is of most service. It ministers to economy and to efficiency. And the interest of the farmer is not in all respects separated from these interests."

The President finds "the needs which cannot be ignored or postponed" in the industrial centers. He would continue the "very considerable and in some respects very serious inconveniences to which the daylight-saving law subjects the farmers of the country" for the benefit of these industrial centers. The daylight-saving law was passed as a war measure, to save fuel which went into the production of artificial light. It did save fuel in those industries where artificial light was needed at the close of the working day. Theoretically, it saved fuel used in lighting homes, by enabling the families to retire at an earlier hour. Theoretically, also, it contributed to the production of food by enabling the city laborers to have an extra hour for work in home gardens. Its only possible effect upon the efficiency of industrial workers was the extra hour of daylight to be used in other labor or recreation after the day's work was done. It is still to be demonstrated how or where it helped increase production in the industries which the President recognizes as of the greatest public service.

On the farms it did necessitate the use of both fuel and light in the earlier day for dairymen and others who had to meet early milk and produce trains. It necessitated the waste of time while awaiting the evaporation of dew during cultivating, haying and harvesting seasons. It necessitated the waste of an hour at the close of the normal day when all natural conditions are favorable for greatest and most efficient work. On the farms it prevented economy and efficiency in the production of the most important commodity—food. In the present clamor for lower prices on the necessities of life, food supplies and food prices are most complained of. Yet in this time of general unrest the production of food would be hampered for the questionable benefits of the industrial centers. The city people are not to be blamed for desiring an extra hour of leisure, if they are willing to pay for it. We all like our hours of rest and recreation, but we must expect to pay for it either in decreased returns to ourselves or increased payments to those who supply our necessities. As a salve to the industrial worker the daylight-saving law was a success. As a national aid at a time when "the immediate and pressing need of the country is production" its failure should have been evident to anyone who cared to examine its general application.

The "Unrest"

THE AIR is full of talk about a universal "unrest" prevailing thruout the industrial world. Every day we hear of strikes and demands, for more pay or shorter hours, or both. It includes all classes and industries from the window cleaners' union to the employees of the steel industry—the latest body of workers to vote a strike. Yet, in the midst of all this there is an insistant demand that prices of commodities shall be lowered. Reports show that practically the same conditions exist in all countries, and this suggests the thought that there must be some general cause, and that it probably is a natural result of war experiences.

Underlying the superficial objects of wages and hours, and vastly more revolutionary than these, is the demand made by the workers for a part in the management of industry. This movement started in England two years ago and has gradually spread to other countries until the principle is espoused by practically every large body of industrial workers. So strong is the idea in England that many of the "captains" of industry, and part of the government, accept the proposition. This idea is at the base of the Plumb plan for government ownership of railroads and other national industries. While this particular bill seems to have died, the principle has in no way been abandoned.

Part of the "unrest" is caused by, (1) the reaction from the nervous tension produced by wartime experiences, and the abnormal wages received. (2) There is the universal feeling by both capital and labor that this is the time to make a "killing." (3) Nothing in history has so aroused the class consciousness of the people as has the war. (4) The war taught the effectiveness of concerted action, and has proven that might, properly directed, can accomplish almost anything. (5) Added to these is the effect of the oft-repeated assertions concerning the sacredness of the rights of the common people, and the justice of the principle of democracy.

So hazy is the common conception of the principles involved that we have the present exhibitions of social unrest, frequently in purely selfish and unreasonable demands and activities. On the other hand, many men representing capital understand them no better and but increase the trouble by refusal to see any grounds for changing the old order of political and economic relationship. One thing may be set down as certain: nothing can be reconstructed upon the same lines as existed before the war. But, any rearrangement, to prove better, must be based upon justice, intelligence and a common desire to advance the common good. Much of the present unrest is born of no higher sentiment than selfish greed, and until that gives place to nobler and more intelligent ideals there can be little improvement.

HARRISBURG LETTER

Departmental Organization. — Reorganization of the State Department of Agriculture which has really been under way for months is now being announced thru notices of reappointments of men at the head of various activities to be chiefs of bureaus which have been given designations similar to those in the federal system. There have been no changes in the personnel of the heads of bureaus, all of whom have been placed in charge of the old and new work apportioned to their divisions, this policy having been adopted after Secretary Rasmussen had worked with them for half a year. The bulk of the changes will be made in the minor places where some persons holding jobs more thru pull than anything else will give way to specially trained men and women. The real plan of reorganization will take the rest of the year to get into running order and will be tested out during the winter with every chance of a change if it does not meet expectations. It is not generally known that systems of the national and state governments in regard to agriculture have all been studied in the last six or eight months and that inquiries which it was stated under the former administration were under way are now being pushed. Except for Guy C. Smith, the chief of the bureau of markets, the heads of bureaus remain the same.

Planning Institutes. — Men in charge of farmers' institutes have been to school at State College the last week or so, and if plans outlined by Secretary Rasmussen are carried thru the institute will be a very different kind of a meeting than anything held before. The tendency in recent years has been for lecturers to present their views and while attendance has been large in many districts the institutes were more of a monologue than anything else. The plan outlined for the institutes this coming season is to reduce the number of meetings and to have those in attendance do most of the talking, the state representatives being present to give such advice or expert information as may be desired. Special pains will be taken to secure farmer speakers with experience with various crops.

Fair Crop Reports.—In spite of inroads of pests and the weather conditions the reports coming to the Department of Agriculture the last week indicate that Pennsylvania's food yield this year in general will be good. There will be more wheat and corn than last year, with prospects that potatoes will run about where they were in 1918. The state is making an effort to get the farmers to make reports asked by the federal government so that a general national survey can be made.

Cutting Detours. — Orders have gone out from the State Department of Highways to reduce the length of detours wherever possible and that as work progresses and arrangements can be made to open roads. The one-way road has not been found practicable under construction operations. Contracts for additional road construction are being made rapidly and it looks as tho the state would have half a thousand miles under contract before long. The prices would have caused shivers a few years ago, but now seem to be accepted without comment. In the last few weeks York County has voted in favor of a $2,500,000 road loan and other counties are preparing to submit loan issues to their people as part of the plan of co-operation with the state.

Scarcity of Labor.—Many complaints are being made to the state authorities that labor is almost unobtainable. There have been so many requests made to bodies in cities and boroughs for aid and in some instances people have sent men to farms. In the fruit growing sections there is a great demand for hands to gather apples and peaches and certain localities are badly off.

Teachers' Salaries. — With the time for opening schools at hand there is every indication that the act of 1919 increasing the pay of the teachers will get into court before a system is evolved. It is one of the strange commentaries on legislation that the teachers salary proposition, next to the Philadelphia charter and workmen's compensation increases, the most discussed proposition of the whole session, should be the last thing to be acted upon and, when adopted, should be in a state difficult of interpretation. There have been many districts placed in a serious position by the new law and there will doubtless be many teachers who will not get an increase while some may suffer actual loss. The way the situation is today there are conditions under which the whole question of an increase will depend upon the kindly feeling of directors and just how far they can go in districts where the tax limit and borrowing capacity have been reached is easily to be seen. It looks as though the act with its uncertainties will have to go to the courts for interpretation and that the session of 1921 will have to correct it.

Hospital Appropriations. — The question of whether the state can make an appropriation to a hospital or home which is a sectarian institution is now in the courts, a suit having been brought here to enjoin payment to some 66 which it is alleged are religious institutions. This proposition has been often threatened and the result may have important bearing upon the appropriations of the future. The state will file an answer and the burden of proof will be upon the people who started the suit.—Hamilton, Harrisburg, August 25.

NEW YORK LETTER

Farmers' Interests at the Fair.—Cornell College of Agriculture will put on several rural plays at the State Fair in Syracuse, using events of local history, simple staging, and acting. If this work makes the hit it is expected to with rural people the college will advise and assist communities in this work. This is a worth-while effort along the line of adding to the pleasures of country life. The race track at the fair has been so improved that it is now conceded to be the best in America. The horse exhibit is to be of unusual interest this year. The draft horse entries are especially of value. The new horse barn with its 400 new modern stalls will be used. The agencies working along Americanization lines, will put on a pageant illustrating the discovery of the famous salt wells of this region.

Fighting Army Worms. — After prompt and vigorous efforts to repulse the invasion of the army worm in four towns of Cayuga County, the farmers have won out. They plowed furrows around their fields of grain and corn. Then poison or oil was poured in as the worms collected. The third brood will hatch in a few weeks and will be even more destructive, but most of the crops will be in then.

Fighting the Corn Borer.—Five counties of the state are badly infested with the European corn borer, and are now under quarantine. Over 1,000 men were employed early in the season in destroying the pest. Yet in June and July the ravages were considerable. In September the second brood will come and will be far more destructive. Commissioner of Agriculture Wilson has called a conference in Albany on August 28 and 29 to consider this question. Representatives of the Department of Agriculture and noted entomologists will confer on methods of eradication of this dangerous foe.

Increase in Savings.—The postal authorities report an increase in the postal savings in New York City for July of $451,000 over that of July, 1918. There were 153,819 persons having accounts.

Expediting Food Delivery.—Governor Smith has appointed as a temporary committee to speed up the transportation of food from farms to markets several officials who served on the state and federal transportation committees during the war, with Peter Ten Eyck as chairman. The use of rural motor trucks will be encouraged by this committee. Such trucks have more than proven their value in this state in the delivery of perishable foods.

Market Notes.—Hay is moving slowly, but at good prices. Eggs are scarcer than ever before at this time of year, prices from 52 to 65 cents. Poultry is in great demand, and high in price. Potatoes are holding up far beyond last year's early potato prices. Western onions have been sent in unusually early, but are a short crop, and state onions have increasingly better prospects. Penn Yan grape growers are offered $150 per ton for best grades, and no salable grapes will go for less than $100, despite prophesied prohibition effects. Buyers are right in the fields looking for all sorts of fruit and furnishing delivery free in many cases. Raspberries made the best prices on record 24 to 28c per quart. The dye manufacturers were for the first time live bidders for this source of colorings

Milk Trust Probe.—It is said that District Attorney Swann, of New York, has in his possession papers proving that officials of the agricultural department have received money for using their influence for the dealers' milk trust. The people and the press are urgent that the Governor dismiss such officials. The evidence will be placed before the special grand jury to prosecute cases of food profiteering.—F.

NEW JERSEY LETTER

Staple Crops.—A decrease in the acreage of white potatoes, an increase in the acreage of sweet potatoes, a decline in the condition of all grain and grasses in New Jersey are the outstanding features of a report that has been issued by G. L. Morgan, field agent of New Jersey. He says that the decreased acreage of white potatoes is due to unfavorable weather at planting time and the high cost of fertilizers and labor, while the decline in the conditions of grain and grasses is due to dry weather at planting time and the high cost of fertilizers and labor, while the decline in the condition of grain and grasses is due to dry weather, plant diseases and insects.

Poultry Raisers in Automobile Run.—A large number of the members of the Mercer County Poultry Association enjoyed an automobile tour over several parts of Central Jersey during the week, and inspected various chicken farms in Mercer County. They were accompanied by poultry experts from the New Jersey Experiment Station.

Agricultural Problems Discussed.—State Comptroller Newton A. K. Bugbee was one of the principal speakers at the annual picnic held by Verona Grange of Verona during the week. He discussed farm demonstrations, better marketing facilities, experimentation in cranberry growing, elimination of vine rot, development of fruit growing, reclamation of waste lands, advance made in poultry husbandry, and the need of increased facilities for agricultural education at the New Jersey State Agricultural College.

Food and Farm Work.—One of the big features of a festival to be held on the Y. M. C. A. field in Trenton early in September by the members of the Cadwallader Heights Methodist Church will be an agricultural exhibit and demonstrations of food garden work. Miss S. P. James, home demonstration agent of the Mercer County Board, will demonstrate food questions, the proper use of milk, etc. There will be demonstrations in home gardening, use and care of garden tools and other practical suggestions. There will also be exhibits of canned fruits and vegetables from a number of the girls' canning clubs located in Central New Jersey.

Wholesale Milk Prices.—Milk sold by the Dairymen's League for August brought a price of $3.13 or about 6 2-3 cents per quart. This was for 3 percent milk in the 200-mile metropolitan zone with the usual differentials for freight and butterfat.

Burlington Grange Plans Outing.—One of the big attractions of the agricultural season in Burlington County will be the annual picnic of the Burlington County Pomona Grange, which will be conducted on the fair grounds at Mount Holly and for which plans are now being perfected. One of the features will be addresses by men prominent in grange affairs in New Jersey, including Walter H. Havens, of Monmouth County, master of the State Grange. John A. McSparren, master of the Pennsylvania State Grange will also speak.

Poultry at Trenton Fair.—Harvey E. Rogers, superintendent of the poultry, pigeon and pet stock department of the Trenton Fair, which will be opened September 29 to October 3, has sent out an unusually large number of premium lists to persons who contemplate making entries. From present indications there will be numerous entries from breeders of fancy stock, as the Trenton Fair has become known as an important sales centre for fancy breeds. The Inter-State Fair Association, is a member of the American Poultry Association, and the poultry exhibition will be governed and run under the latest revised official poultry show rules of the American Poultry Association. All prizes will be awarded strictly in accordance with the American standard of perfection.

Purchase Cows for Farmers.—The Mercer County Board of Agriculture is preparing to purchase two loads of cows for Mercer County Dairymen.—K.

$3.21 FOR SEPTEMBER LEAGUE MILK

Dairymen's League milk for September has been sold for $3.21, or about 6.8 cents per quart. This price is for 3 percent milk at the 200-210 mile zone with the usual differentials for freight and butterfat. The September price is 8 cents a hundred more than was paid producers for Augsut milk. It was determined by the price agreement now in force between producers and dealers which takes both market conditions and cost of production into consideration.

The average market price of butter for the 30 days ending with August 20th was $0.5452. The average market price of cheese for the same period was $0.3131. To the average of these prices together with the average price of skim milk and whey is added 36 cents to allow for costs of production. The result is the September price.

The prices in the Buffalo District for September are $3.08 per hundred (30c per gal.) for 3 percent milk with the usual differential for butterfat, or $3.32 flat.

The flat price in the Rochester District for September is $3.49.

FARM MEETING CALENDAR

Vegetable Growers' Convention, Detroit, Mich., September 9-13.

New York State Fair, Syracuse, N. Y., September 8-13.

National Board of Farm Organizations Meeting, Washington, D. C., September 16-17.

Interstate Fair, Trenton, N. J., September 29-October 3.

National Dairy Show, Chicago, Ill., October 6-12.

National Grange Meeting, Grand Rapids, Mich., November 12-21.

New Jersey Horticultural Society Meeting, Atlantic City, December 1-3.

Peninsula Horticultural Society Meeting, Chestertown, Md., January 6-8.

PENNSYLVANIA FAIRS—1919.

TOWN	COUNTY	DATE
Towanda	Bradford	Sept. 2-5
Quakertown	Bucks	Sept. 5-6
Butler	Butler	Sept. 2-5
Gratz	Dauphin	Sept. 2-5
Wattsburg	Erie	Sept. 2-5
Indiana	Indiana	Sept. 2-5
Stroudsburg	Monroe	Sept. 1-5
Philadelphia	Philadelphia	Sept. 1-5
Warren	Warren	Sept. 2-5

NEW YORK FAIRS—1919.

TOWN	COUNTY	DATE
Whitney P't	Broome	Sept. 2-5
Little Valley	Cattaraugus	Sept. 1-5
Chatham	Columbia	Sept. 1-4
Walton	Delaware	Sept. 2-5
Westport	Essex	Sept. 2-5
Rochester	Monroe	Sept. 1-6
Fonda	Montgomery	Sept. 1-4
Penn Yan	Yates	Sept. 3-6
Boonville	Oneida	Sept. 2-5
Albion	Orleans	Sept. 3-6
Fulton	Oswego	Sept. 1-5
Cooperstown	Otsego	Sept. 1-3
Troy	Rensselaer	Sept. 1-4
Troupsburg	Steuben	Sept. 2-5

NEW JERSEY FAIRS.

TOWN	COUNTY	DATE
Gibbsboro	Camden	Sept. 1-2

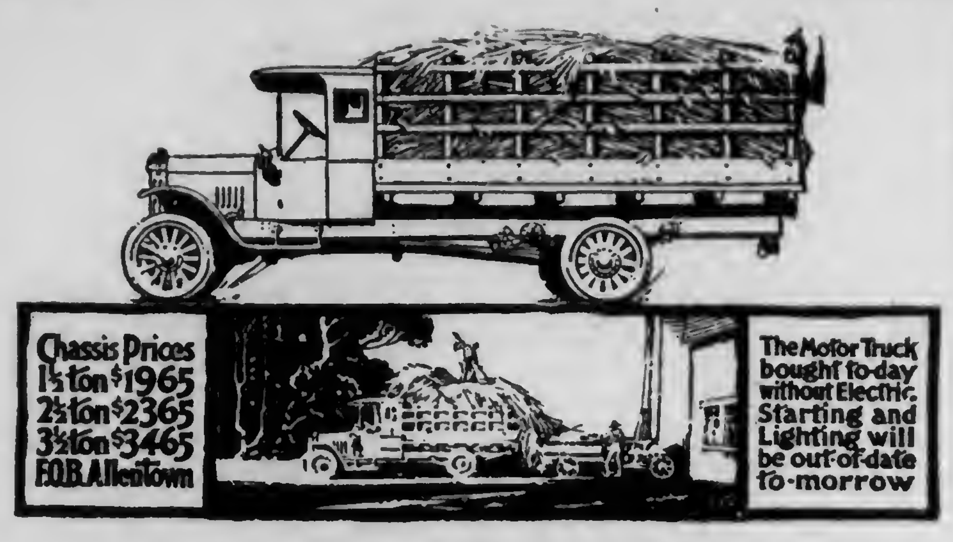
MARYLAND FAIRS

Town	Date
Timonium	Sept. 1, 2, 3, 4, 5, 6

DELAWARE STATE FAIR

Wilmington, Del. Sept. 1-5

Talking about mean men, how about the man who is all the time trying to take something out of his land and never puts anything back?


Chassis Prices
1½ ton $1965
2½ ton $2365
3½ ton $3465
F.O.B. Allentown
The Motor Truck bought to-day without Electric Starting and Lighting will be out-of-date to-morrow

And on the Farm, Too

Load the thousand and one internal farm transportation problems on a husky, enduring Bethlehem. The time-devouring odd jobs that add dollars to your costs and hours to your working day. A Bethlehem Motor Truck on your farm will not only mean a connecting link between you and your market, but a production time and money saver as well.

The Bethlehem Internal Gear Drive, Electric Starting and Lighting System, superstrong frame, and powerful, economical engine represents more farm value per cost dollar than any other hauling apparatus.

The nearest distributor of Bethlehem Motor Trucks can tell you of the many economies a Bethlehem could effect on your farm. Examine a Bethlehem.

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An ideal Motor-Driven outfit, one of our numerous complete units.

Leader-Trahern Dealer's Knowledge Helps *You*

If you plan to have a water system installed in your home or farm, you should not deal with a concern which is too far away from your locality to know what your special water needs are.

"Everybody Knows
Leader-Trahern
TRADE MARK
Water Systems"

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Leader-Trahern Tanks, Pumps, Power Equipment and complete water system units, for deep or shallow wells, electric motor or gas engine drives — any capacity, are the most complete line in America. We have exactly what you want, *to fit your local requirements.*

Write to us for the address of the dealer nearest you.

KEYSTONE SUPPLY & MFG. CO., Philadelphia
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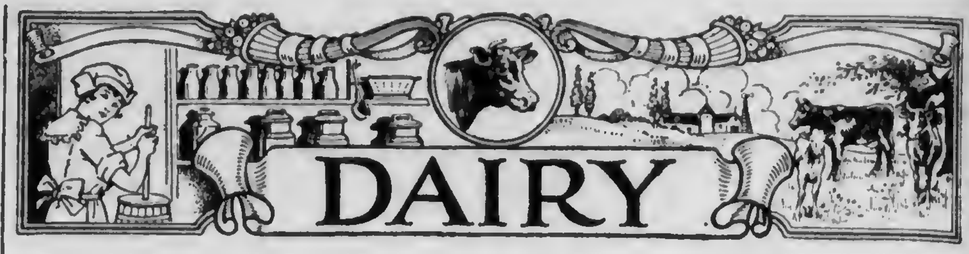

DAIRY

FAYETTE-WASHINGTON TEST REPORT

A report of the first quarter's work of the Fayette-Washington Cow Testing Association shows a big variation in the feed cost of producing one hundred pounds of milk, ranging from 44c to $3.63. This might be due to one or all of several reasons: To poor cows, not feeding the proper rations or poor management thruout the dairy. The association records will provide members with a guide to determine just exactly where the leak is. At this season of the year when some men are pasturing and others are feeding a rather heavy grain ration, the feed cost of production should not be taken too seriously. The records, however, show in a general way the efficiency of production in the several herds. The most striking features of the records are:

Saving Manure is Saving Money

Total number of cows tested, 239.

Average milk for quarter, per cow, 2,109 pounds.

Average milk for month, per cow, 703 pounds.

Average fat for quarter, per cow, 79.35 pounds.

Average fat for month, per cow, 26.45 pounds.

Average test for quarter, 3.7 per cent.

Cost of 100 pounds of milk, $1.34.

Cost of one pound butter fat, 32 cents.

The feed cost to produce 100 pounds of milk ranges from 44 cents to $3.64.

Feed cost to produce one pound of butter fat ranges from 12 cents to 74 cents.

The three highest herd averages are as follows:

The Holstein herd of 23 head owned by Harry Whyel averaged 2,952 pounds of milk and 96.04 pounds of fat at an average cost of $43.88; making the feed cost per 100 pounds of milk $1.48 and the cost per pound of butter fat, 45 cents. The herd showed an average profit per cow of $89.79.

The second herd in the association was the herd of 15 grade Holstein cows owned by W. J. Stewart. The average production per cow was 2,596 pounds of milk and 89.49 pounds of fat. The average feed cost was $38.05, making the cost for milk $1.47 per cwt., and for fat, 42 cents per pound. The average profit per cow was $81.37.

The third herd in the association was the Holstein herd of 7 cows belonging to W. H. Blainey. This herd averaged 2,479 pounds of milk and 98.47 pounds of fat per cow, at an average cost of $38.61 per cow. This made the cost of milk $1.56 per cwt., and of fat, 39 cents per pound. The average profit per cow was $54.50.

SAVE MONEY—CARE OF MILK

Farmers are losing a great deal of money this season because of soured or tainted milk. Nearly every condensory, milk plant and cheese factory has found it necessary "to turn back" a large amount of milk because it has so deteriorated that it can not be manufactured into condensed milk, milk powder or cheese.

The producer realizes that every can of milk "turned back" is a real loss to him. He should use every possible means to insure the milk reaching the plant in good condition. The first essential is to produce clean milk This should be much easier in summer than in winter because it is easier to keep cows and stables in good condition.

The cows on many farms are compelled to walk thru a swamp, mudhole, or muddy barnyard in coming to the barn to be milked. This tends to cover the legs and udder of the cow with mud and water containing a high bacterial content, and such a condition should be remedied at once. The stables should be kept clean. In many cases the farmer is so busy with the crops that the stables are left until the rush of work is over or until a rainy day. Such a practice not only makes it extremely difficult to produce clean milk, but also attracts many flies which are an added pest in the production of clean milk.

The care of the utensils has been found in some places to be the most important of all. The strainers and milk buckets should be well washed and scalded each time they are used. In many cases the cans in which the milk is marketed are washed at the plant. This is a good plan and in

some plants it is done thoroly and the cans are sterilized by steam. In other cases, however, the cans should be scalded again after they are returned to the farm. Whey is often taken home from the cheese factory in the same cans that the milk was brought to the factory in. Too much attention can not be given to the cans if this practice is followed. The cans must be thoroly washed, scalded and aired before they are used again for milk.

The milk should be cooled just as low as possible just as soon as possible after it is drawn. The exact method by which this can be most economically done is a problem for each individual producer. A large amount of cold running water is a big asset to any farm producing milk. Many farmers set the cans of milk in such a stream or vat of water and find it a very satisfactory method. Other farmers who do not have a large amount of water find it necessary to use an aerator to cool the milk rapidly. Some use a combination of these two methods. Where one has ice the cans may be put into a vat of ice water. Milk taken to a shipping station, or to a "four corners" to wait for a truck should be protected from the sun. This can be accomplished by covering the cans with a wet blanket.

To sum up: Produce clean milk. Cool down quickly and hold at as low a temperature as possible until it reaches the market.—L. W. Morley, Penna. State Extension Service.

SILOS IN WESTERN NEW YORK

In a recent issue of Pennsylvania Farmer I noticed a statement by a correspondent that silos were being discarded by dairymen of Chautauqua County, giving as a reason that Chautauqua was not adapted to culture of corn. I do not wish to question the veracity of your correspondent, because that may be entirely true of his immediate neighborhood, and not be true of the county as a whole. Chautauqua County raises grapes and other fruits, but much of the county is a fine farming and dairying region, and altho I can not be positive, I suspect that your correspondent is down on silos. Chautauqua County is bounded on the north by Lake Erie, east by Cattaraugus County, south by Warren County, Pa., and west by Erie Co., Pa. It contains Chautauqua Lake, a beautiful sheet of water, which together with Lake Erie gives it an equitable climate. Cattaraugus County has no water front, is much more elevated, and by all isothermal rules should and does average much colder. Yet our county manages to produce an immense amount of silage corn, altho not a large quantity is raised for grain. When the milk strike was on last winter, Randolph figured largely in the fight, as shown in all the farm papers, and Randolph in Cattaraugus County is on the eastern boundery of Chautauqua County.

Now Cattaraugus County is a great milk producing region, dotted all over with cheese factories, creameries, condensaries, with at least one powdered milk factory, all of which are helped out wonderfully by silage. Also, much milk goes to Buffalo. And silos—yes, new ones are being erected every year and very few who have them would care to dispense with them.—H. M. Beeles, Cattaraugus Co., N. Y.

You know how scarce hen's teeth are? Then give plenty of grit to grind the feed.

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GET rid of your coal wasting, muss-making unhealthful stoves, now and forever! In their place install a Mueller Pipeless Furnace and on the coldest winter nights enjoy the comforts of a well-heated home, moist healthful air, with the pleasant thought that you are saving from 1/3 to 1/2 on fuel. Your fuel bill at the end of the winter will prove this saving. But be sure it's a

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A written guarantee goes with every Mueller Pipeless Furnace installed. Whether it's an old house or new, 3 or 4 rooms or a dozen or more, the Mueller is guaranteed to heat every room comfortably. And it does—letters from home-owners from coast to coast prove it.

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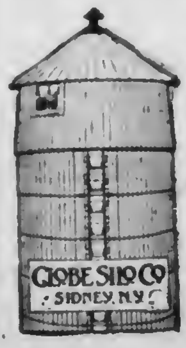

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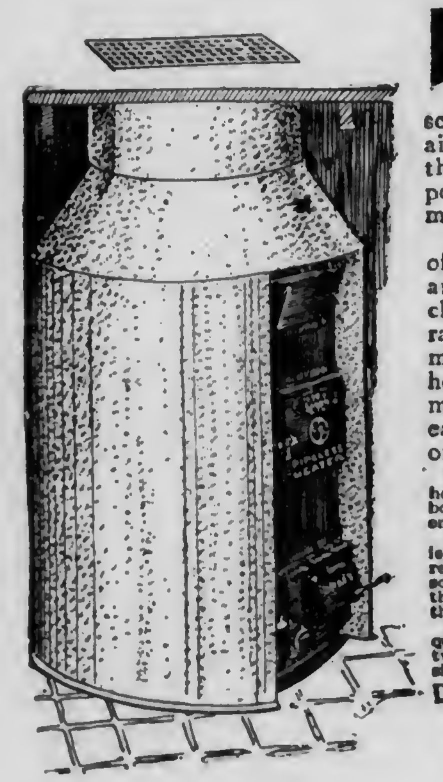

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The Life Saver has an adjustable register collar to fit any height basement. Every seam is riveted like a steam boiler under 30 tons pressure. It is guaranteed permanently smoke and gas tight.

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3 horses, 3 heifers, hogs, reaper, mower, sulky plow, sulky cultivator, harrows, gasoline engine, wood-sawing outfit, horse corn planter, fanning mill, complete list machinery, tools, wagons, harness, crops on farm, etc., included by owner to retire now. Two miles R.R. station and near large city; lovely lake on farm. 50 acres warm, loamy tillage, 20-cow, wire-fenced, spring-watered pasture, woodlot, estimated 60,000 feet timber, choice fruit. Good maple-shaded 10-room house, barns, silo, poultry, hog houses. $5,500 takes everything, part cash. Details page 40 Catalog Bargains 19 States. Copy free. STROUT FARM AGENCY, 1422 B. E., LAND TITLE BLDG., PHILA.

104 Acres For Sale

Near Langhorne, Pa., 25 miles from Phila., 5 from Bristol, 7 from Trenton, N. J. 1,500 peach and apple trees, six years old; 8-room stone and frame house, bath, hot and cold water, toilet sewer system; 3-room tenant house; large barn; poultry house; hog house, etc. Everything in A1 condition, crops planted, all farm work up to date. Price $9,500; terms $5,000 cash, balance mortgage. WM. WINCKLER, BRISTOL, PA., R. F. D. 1.

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For Sale within two miles of Bartles Station on the Detroit, Toledo & Ironton R. R., 12 miles north of Ironton, Ohio, and on macadamized road. 300 Acres cleared, the remainder in unculled second growth timber from 45 to 75 years old. Plenty of water and all fenced. Good 7-room dwelling, 35 tenement houses, store building, four stables, crib, warehouse, mill and machinery for grinding, clay, orchard. Large area underlaid with No. 5 coal, limestone and good No. 2 fire clay. Well suited for stock farm and timber business. E. B. WILLARD & CO., IRONTON, OHIO.

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HORTICULTURE

TIMELY TRUCK NOTES

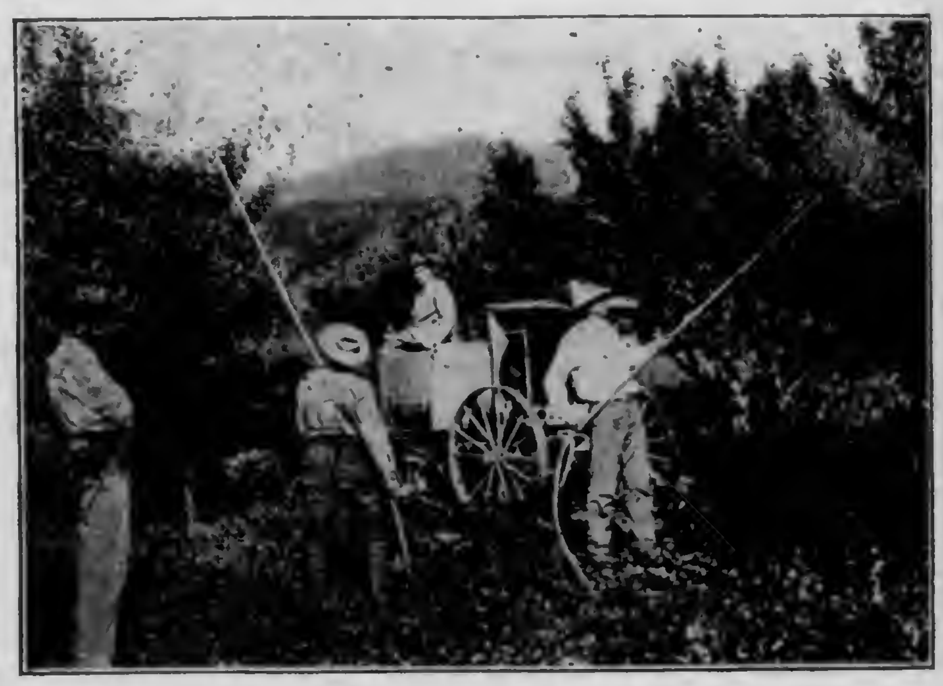
By R. W. DE BAUN

Fall Lettuce

The fall lettuce should be thinned so that the individual plants will average nearly twelve inches apart in the row. This will give each plant an opportunity to develop a large, solid head. The amateur grower hates to pull out the extra plants but unless it is done, large heads cannot develop.

The quickest and easiest way I have found for thinning rows of lettuce growing from seed is as follows: Use a very small, short handle hoe with a handle not more than a foot long. The operator usually works on his or her knees, taking three rows at once. The blade of the hoe is slipped in very close behind the plant which is to remain. The hoe is pushed backward two to four inches so as to clear a space beyond the desired individual plant. As this is done the operator quickly glances ahead and selects a desirable plant about the proper distance from the last selected plant. It makes quick and excellent work possible if plants can be selected which stand by themselves. Then the short hoe is slipped in on the near side of the selected plant and quickly pulled towards the operator. In the meantime the operator's other hand is placed in the cleared space which was made by pushing the hoe backwards. Then, as the hoe is pulled away from the next plant, the discarded plants are simultaneously gathered up so that they can be thrown to one side. If inexperienced help is allowed to let the cut-off plants remain where they would naturally fall, it would be inconvenient for them or the supervisor to see just what kind of work is being done. The natural inclination is to leave two or more plants where one should be and to allow the individual plants to stand too closely in the row.

Sometimes a desirable piece of ground for lettuce is occupied by a previous crop until it is too late to sow the lettuce seed. In that case the extra plants in the seed rows of another sowing, can be used to set out the lettuce ground until almost the middle of September in the vicinity of Philadelphia.



Applying a Summer Spray to Peaches

Cultivation of Carrots

Carrots which are green around the stem are not properly grown. It is natural for the more common varieties to be a deep orange color but if the growing carrot is exposed to the sun the uncovered portion becomes green. This is not only unsightly but the flesh becomes green as well. The trouble can be conveniently overcome by covering the carrot roots at least an inch deep with soil after the tops are over six inches high. This method of "hoe harrowing" (cultivating) or of wheel hoeing not only keeps the carrots of a splendid color but it also checks weed growth.

It may not be necessary to mention thinning. However, before any soil is worked towards the rows it is well to have the carrots thinned to stand at least two inches apart. The best way to do the thinning is to get down on one's knees and jerk out the extra plants just as quickly as possible. By trying to be exact or too careful, much time and work can be wasted.

Canhouse Crops a Failure

Crops growing for the canhouses such as tomatoes, pumpkins, and squash are almost a total failure this season. The severe drought of early summer and the constant rains of mid-summer have combined to destroy much of the acreage planted. Very light yields usually result in very high prices. It is hoped that the readers of the Pennsylvania Farmer will be able to dispose of their crop or their pack of canned goods to good advantage.

Care of Onion Sets

Our onion sets are stacked up in shallow trays in the "fertilizer shed." The trays are 3x4 feet, 4 inches deep and the bottoms are made of mason lath 3-16 inches apart. A partition across the middle of the tray strengthens the tray and holds the lath in place. Each tray holds over a bushel of sets. They are piled up with four small blocks between the trays, where each one crosses the one below it, so that air will pass over the sets. Just as soon as we have an opportunity the trays will be repiled. The sets will be stirred and rubbed quickly. If any trays are found in a moist condition they will be set out in the sun and air for a few hours, stirred frequently and then be placed on top of the tiers of trays under the shed.

THE CONTROL OF CHERRY LEAF SPOT

By J. P. STEWART

The United States Department of Agriculture has been conducting some interesting experiments on cherry leaf spot in Michigan, where this disease is especially sever. The disease unfortunately is also prevalent here in the East, however, wherever cherries are grown to any important extent, so that we will have to be on our guard against it. Its control has also been rather puzzling.

The disease first appears as small, porplish spots on the leaves, which later become brown. The spots are usually circular, but they often occur so close together that they form a large irregular diseased area. The diseased spots eventually drop out, leaving holes in the leaf resembling shot holes, especially in the smaller spots. When badly infected the entire leaves turn yellow and drop, and often leave the trees practically bare by mid-summer. If a tree is infected severely in early spring, the fruit often fails to mature. The disease is caused by a fungus which passes the winter in the fallen leaves, from which it infects the new foliage the following spring, much like the common apple scab.

In the work in Michigan, it also appears that the methods of control are much like those for apple scab, altho the time of the applications differ somewhat. Several sulphur and copper preparations were tried in the West, but the only ones giving satisfactory results were lime-sulphur solution and Bordeaux mixture. Trees sprayed with the self-boiled lime-sulphur mixture (8-8-50) were hardly distinguishable from the checks or unsprayed blocks. The Bordeaux also was only safe on the sour varieties, while the lime-sulphur solution could be used on both sorts.

The strength of Bordeaux used was 3-4-50, or three pounds of bluestone to four pounds of lime to 50 gallons of water. The limesulphur was used at the rate of one and a half gallons of the best commercial concentrates to fifty gallons of spray, on the sour varieties, and at the rate of one to fifty on the sweet cherries. To control insect pests, two pounds of lead arsenate may be added to the first two applications.

The proper number of applications seemed to be three, altho two may suffice where the trouble is not too severe. The first of these applications should be made as soon as the petals fall, the second about three weeks later, and the third immediately after the fruit is picked. In New York, the last of these applications is generally most important, and the first is probably least necessary as a rule. The same is generally true in the South. Wherever the disease is very severe, however, it seems that it is very risky to omit any of the three sprays named.

Nitrate of Soda for Leaf-Curl

In many parts of the East this year, the leaf-curl on peach was unusually severe and left the trees in a very weakened condition. Ordinarily a peach tree can lose a lot of foliage and recover so promptly that the loss would never be suspected. This, however, was not the case in at least two instances that have come to the writer's attention this season. In both of these cases, nitrate of soda was applied as soon as the need for extra stimulation became apparent, and in the one case the response was almost immediate and completely satisfactory.

In the other case, the application was made rather late in the season, on a light sandy loam soil, and the response is not yet so evident, probably because the trees were further gone. In many cases, however, the effects of the application are becoming apparent within about three weks, and we will be interested to see whether these trees can be retrieved from practically certain loss by this simple procedure. In the last case, about two to three pounds of nitrate was applied to each tree, simply as a top-dressing.

The Champion Peach

It is quite remarkable how one's opinion of a variety may change in a couple of weeks. Two weks ago I was about ready to scratch the Champion peach off my list of commendable varieties. That was when it was still small and green, but with the rot showing very prominently on it, nevertheless.

Proper Spraying Prevents Brown Rot

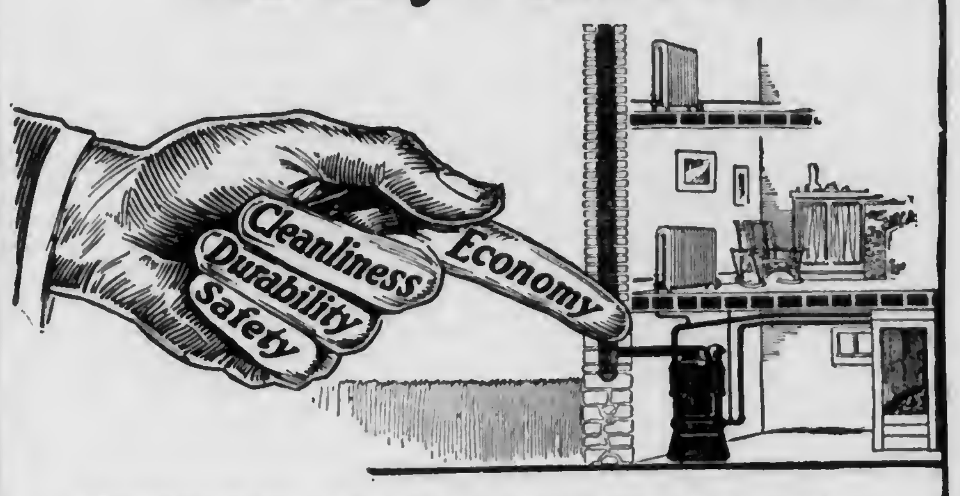
I still regard it as distinctly hazardous for any commercial planting, but its quality and size and general beauty when it finally pulls thru to real ripeness are such as to commend it very highly for home plantings, or for any good, direct or local market. It certainly has the quality, and if greater control were ever secured over the rot, it would still command considerable attention for more general commercial purposes. At present, however, we would still reserve it chiefly for the home orchard.

FARM PRICES

The level of prices paid producers of the United States for the principal crops increased about 6.1 percent during July; in the past 10 years the price level increased about 1.6 percent during July. On August 1 the index figure of prices was about 17.3 percent higher than a year ago.

The prices of meat animals—hogs, cattle, shep, and chickens—to producers of the United States increased 4.2 percent from June 15 to July 15; in the past nine years prices decreased in like period 0.2 per cent. On July 15 the index figure of prices for these meat animals was about 14.1 percent higher than a year ago, 36.1 percent higher than two years ago.

The Best Investment for any Farm House



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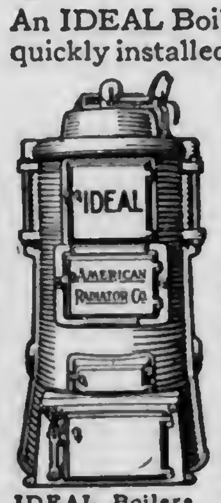
An IDEAL Boiler and AMERICAN Radiators can be easily and quickly installed in your farm house without disturbing your present heating arrangements. You will then have a heating outfit that will last longer than the house will stand and give daily, economical, and cleanly service.



IDEAL Boilers will supply ample heat on *one charging of coal* for 8 to 24 hours, depending on severity of weather. Every ounce of fuel is made to yield utmost results.

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You will say that IDEAL heating is the greatest improvement and necessity that you can put on your farm, for it gives you the needed comfort and enjoyment during the long season of zero, chilly, and damp weather.

It is not absolutely necessary to have a cellar or running water in order to operate an IDEAL heating outfit. There is no need to burn high-priced fuel because IDEAL Boilers burn any local fuel with great economy and development of heat.

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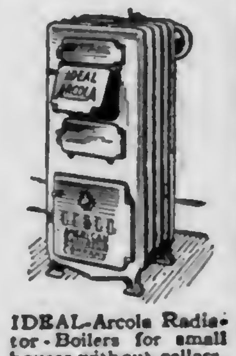
We want you to have a copy of "Ideal Heating." It goes into the subject very completely and tells you things you ought to know about heating your home. Puts you under no obligation to buy.



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LEAP'S PROLIFIC. Harvested before the rain; clear of cockle and garlic. Price $3.00 per bu.; bags extra. F. O. B. West Chester. JOSEPH H. BRINTON, Homestead Farm, West Chester, Pa.

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Farm Products Prices and Prospects

OFFENSE OF THE PACKERS

Such response as the "Big Five," who are trying to monopolize the food trade of the country, make to the charges of the Federal Trade Commission, consists mainly of a claim that what they have done and are doing are for the benefit of the country and its people. That is the familiar claim of all autocratic power, however it may be constituted and whatever its purpose. The preliminary report of the Commission to the President covers a wide field and deals with a variety of activities, besides the slaughter of cattle and sheep and the control of markets and of foreign trade in beef and mutton. That is a familiar story. There is a claim that they are not combined and have no agreement as to quantities dealt in or prices charged, and consequently commit no violation of the anti-monopoly policy of the Government. It is a well known and indeniable fact that there was a combination and a close co-operation in building up the vast control that has been established. While that has been nominally abandoned and there is no formal agreement such as the law forbids, there is in fact a mutual understanding and co-operation on a common basis that makes the maintenance of effective competition impossible.

One of the chief claims is that this vast combination is the effect of adjusting the food supply to the demand in a way to make the cost economical and the price moderate, with only a small percentage of profit for the huge corporation, and figures are given out to convince of this. But the expanded capital has been largely worked out of past profits turned into forms of investment in the business, and whether prices are higher or lower than they would otherwise be cannot be calculatd from the figures presented. Th huge control through the several centers for collecting material and distributing products determines the price of the animals at the yards and of the meat and other products in the markets. This powerful control extends in no small measure to those who raise the sheep and cattle, and to a less extent the hogs, and leaves them no freedom in the markets. It extends also to the agencies for distributing the products of slaughter houses to the markets for food, not only by wholesale but by retail through cities and towns. It does not apply to meat alone, for skins, horns, hoofs and bones have been utilized and made profitable. This is claimed as a merit and a benefit to the public; and so it is in effect, but it is not necessary to constitute and maintain a monopoly to attain such results. When that is done it greatly enriches the few and hampers the competitive efforts of the many.

But this monopolizing and profiting process on a great scale has by no means been confined to stock-farms, butcher shops and meat markets. It has been extended to many other articles of food, dairy products, grain and fruit, and even to building material in no small measure, because in collecting, transporting and distributing on such an immense scale all these things can be worked in with the rest at reduced cost and with increased profit, crowding out or restricting competition on any effective scale. The advantage of this has come largely from means of storage, transportation and distribution from central market places the country over. The companies have built up and maintained extensive packing places and adapted them to a variety of storage purposes, reducing the cost per unit and monopolizing their use. This has been carried on on no small scale into railroad transportation and delivery. The National Wholesale Grocers' Association submitted a complaint to the Interstate Commerce Commission only a short time ago of discrimination granted to these packing combinations by railroads in the cost of carrying their commodities. The packers, not only of meat but of many other things, have yards of their own with cars and tracks and means of loading and unloading, and cars for transportation to distant markets for their own exclusive use. They also have special contracts with railroad companies, according to this charge of the grocers, which discriminates on a generous scale in their favor and to their advantage and profit in distributing commodities.

It is easy to claim for this kind of monopolizing a public benefit and a diminution in the cost of living. This might be the case if it were carried on in an ideal and unselfish manner for the common welfare. That is, it might be made a benefit in a pecuniary sense, assuming that it was conducted with such high motives; but even then it would be the opposite of benefit in its effect upon public and personal interests and rights. It would deaden competition and rivalry in all the productive activities, and, restrain ambition for success in life. This would be a degenerating and corrupting evil, to the ruin of national character and of real enterprise, lowering the morale of the whole nation. Anything more inconsistent with the principle and spirit of genuine Americanism is hardly conceivable, and it is of the utmost consequence that it be stopped, and that the ways be open and free for the energies of American life in a normal state of health and activity.

If all the claims of the packers were conceded, the fact would remain that they still control the meat supply of the United States; that they dominate numerous related industries; and that they are extending their activities in so many other directions as to openly threaten the natural freedom of trade. No matter how plausible the answers of the packers may seem, they have acquired a power over highly important lines of industry, which if not curbed will assuredly lead to a fresh outbreak of monopoly with all its attendant social and economic dangers. Such power, however carefully exercised when under suspicion, is sure to be abused at the first opportunity; for history proves that few men can resist the temptations of unrestrained power, and rightly or wrongly the man-in-the-street will grow jealous of this power over his food supply, affording the wily politician a fruitful opportunity to flay the wicked packer. Judging by their recent propaganda, the packers must have already read the handwriting on the wall; and presumably they recognize that if their present monopolistic tendencies continue, they must prepare to accept one or two alternatives—either Government regulation or Government ownership. Surely they do not intend to precipitate the latter by defiance of public opinion; and it is hardly to be supposed they will seriously oppose the former. If the people should have to choose between exploitation by the food barons or socialization by the Government, it is easy to see where their choice will fall. That some curb upon the overgrasping monopolistic tendencies of the packers will be applied is practically certain.—Editorial in Journal of Commerce.

Front of a Concrete Root Cellar. Such a Structure is Invaluable on a Farm

CANADA'S PLANS FOR HANDLING WHEAT CROP

The Canadian Government plans to handle the wheat crop this year as follows, according to United States Consul Felix S. S. Johnson, of Kingston, Ontario:

(1) A board to buy and market the crop of 1919.

(2) A cash payment on account to be made to the farmer at the time he sells his wheat.

(3) The wheat crop of Canada to be sold by the board at the prevailing world prices, and the surplus proceeds, after expenses are deducted, to be distributed to the original sellers of the wheat in proportion to grade and quantity.

(4) No speculation on exchanges or profiteering by handlers to be allowed in disposing of the wheat crop of 1919 to the disadvantage of either producer or consumer.

(5) A direct and immediate cash sale by the farmer, and a speedy movement of the crop along the usual channels of transport.

IMPORTS OF CEREALS INTO THE UNITED STATES RESTRICTED

An investigation conducted by the Federal Horticultural Board of the Department of Agriculture has shown that two dangerous plant diseases, the flag-smut and the take-all, are prevalent in various countries of the world, other than the United States. Both diseases occur in Australia, the flag-smut is known to exist in India and Japan, while the take-all occurs in Belgium, Brazil, France, Germany, Great Britain, Ireland, and Italy. Wheat is affected by both flag-smut and take-all, while barley, oats, rice, and rye are injured by take-all.

IMPRESSIONS OF FRENCH AGRICULTURE

(Continued from page 3)

It is very probable, however, that since the war, they will begin to change. American mowing machines, cultivators, harrows, plows, threshers and other agricultural implements are beginning to appear more often. The United States Government operated several large farms on an extensive scale. Without doubt thy have had great influence on the French farmers of the neighborhood, an influence which will spread. The National French Government realizes keenly the need for an improved, more intensive agriculture and is already taking steps to introduce it, noticeably in the purchase of supplies and cattle for the regions devastated by the war.

In closing, it is necessary to point out that I have given the impression which the average French farming district made upon me. In isolated cases I have seen farms very much more modern and approaching more nearly to the American ideal. And in certain regions, noticeably the Flanders, farming is much more up-to-date and prosperous. Yet on the whole, conditions are as I have described them and susceptible to much improvement. There is no doubt that our farms, even with the present conditions of labor and high prices of material, are much more worth while. In fact there can be no comparison of the two.—Robert L. Voorhees.

A Feed that wins Your Confidence

You have read a lot about adulterated feeds. Right now there is a bitter fight against the Lever Feed Bill which is in the hands of the Agricultural Committee of the House of Representatives at Washington.

Thousands of tons of low grade by-products, screenings and other refuse have been worked off on the farmer in the form of mixed feeds. Some of them look good but they fail to return a profit to the feeder.

A National law is needed to protect you and other dairy farmers against all sham feeds. You are urged to support the Lever Feed Bill.

We have been manufacturing high-grade feeds for fifteen years. We are the largest manufacturers of feeds in Memphis, and this city produces more feed than any other city in America. The feed which we offer you as the best dairy ration in the world is

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This feed may be new to you but it is well known in the Southern states where our business has been concentrated. It is made largely of materials which are grown in the South.

Happy Cow Feed is composed of cotton seed meal, corn meal, cocoanut meal, wheat bran and shorts, velvet bean feed, unhulled peanut oil feed, alfalfa meal and salt.

These high-grade feeding materials are now produced in such quantities that you can get the benefit of this famous ration. It is an honest feed. Before you have fed a ton it will win your complete confidence.

We do not manufacture food products for human beings. We have no refuse or offal to be worked off in a feed bag. We no not buy oat hulls, rice hulls or any other low grade materials.

You can readily understand why we are so strong for an honest feed law. We are working for it night and day and so are thousands of farmers who are feeding Happy Cow Feed. You owe it to yourself to join this movement because we are working in your interests.

Start at once feeding Happy Cow Feed and you will make the biggest milk profits you have ever known, but in the mean time write to your Congressman and Senator, urging them to support the Lever Feed Bill and make it as strong as possible for your protection.

Buy Happy Cow Feed from your dealer. If he does not sell it, send us his name and the names of a few fellow dairymen and we will see that you are supplied.

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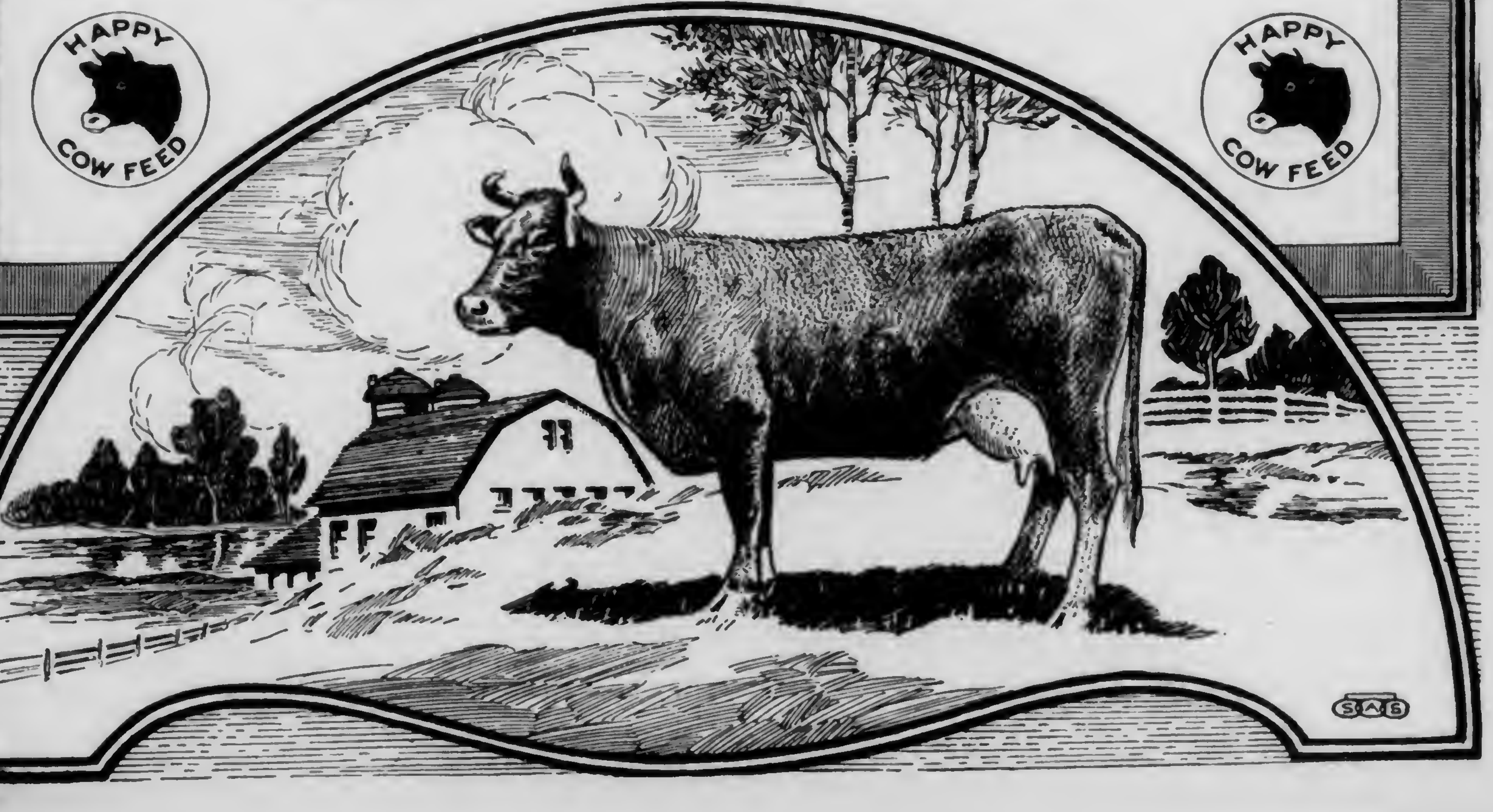

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MAN WANTED
By Sept 1st, white man, married, with small family, to work in dairy, one with experience in raising calves preferred. Must be capable, sober, reliable and willing to take an interest in the work. Good house provided. State experience, references and wages required in first letter. BLOOMINGDALE FARMS, A. S. Cortelyou, Sec., Somerville, N. J.

PIPE second hand. Large stock all sizes furnished with new threads & couplings. Prompt shipment. J. F Griffith, 416 Moyer St., Phila.

WANTED A man and woman, or family, to take care of 30 purebred Holstein cows and 100-acre farm. Must be good milkers. Position open Oct. 1, 1919. CRYSTAL SPRING STOCK FARM, Littlestown, Pa.

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POULTRY

SUMMER POULTRY HINTS

Caponizing has proven profitable on many farms raising surplus cockerels. However capons have appetites and the business farmer must keep a record of the food they eat and the time required to care for them so that he will not engage in a business that does not pay. Some farmers without plenty of fenced ranges find that it pays just as well to market the cockerels as broilers and save the feed and energy to develop the pullets. Others find that the profit on capons is worth the trouble. It is all a question of good management and good salesmanship and the record book which gives an honest report of the wages received for the work.

In marketing the poultry it pays to study the likes of customers and not try to sell them anything but the quality and kind of bird that they like best. Some consumers prefer fat old hens and do not like broilers. Others are fond of broilers and appreciate quality stock each week. Some hotel managers prefer broilers of one size and others may like them a little larger. The profit in the business and especially the satisfaction in the business depends on having pleased customers. An honest farmer receives no satisfaction in doing business with private customers that are not entirely satisfied even if the transaction brings a profit. Of course some buyers are difficult to please but it pays to please or cut out the kickers that are unreasonable and not do business with them.

Putting Band on Breeder

As soon as the nights become cool watch out for any chicks that huddle in brood coops or in the corners of colony houses. They come out on the cool ground in the morning and sometimes catch cold. If watery eyes appear it pays to rub the heads with camphorated vaseline. Do not allow it to get in the eyes. Then place the birds in a house that is free from draughts until the condition disappears. Young stock that are allowed to suffer with colds until their eyes are swelled shut will never make good breeders. The condition may develop into roup and spread thru a large part of the flock. The best way to control colds is to teach the birds to roost when they are feathered out. Breed from stock that feathers early in life and never use weak birds for breeders regardless of their plumage.

It does not pay to try and force the laying hens to molt by half feeding them. The late molters are apt to be the best layers and it is nature's way of giving the bird a rest and a change of plumage. It does not seem sensible to try and upset nature's plan. The molting birds need good care to keep up their vitality. Soaked oats and oats ground and mixed with sour milk make a good feed during molting time that is easily digested. We have filled galvanized pails with boiled oats and placed them on the range and found that the birds liked them and developed the new feathers rapidly. Sunflower seeds are considered a good feed at molting time by many poultrymen. Allow the birds to range among the sunflowers and break down a few of the heads each day so that they can do their own harvesting. If sunflowers are allowed to stand until late in the fall after the seed have ripened, much of it may be stolen by the wild birds.

Sparrows carry lice, make the water pails unsanitary, pick up scratch feed intended for the hens, make the poultry houses dirty by roosting on them and steal mash from the hoppers. It pays to exterminate the sparrows and protect the houses with quarter-inch mesh wire so that none of the pests can use them for roosting places. Sparrows breed rapidly and if a farmer does not make an effort to reduce their population he pays them quite a heavy annual tribute in grain.

It is difficult to properly rear young pullets unless they are separated from the hens. A farmer can scarcely overfeed growing pullets, but old hens take on fat readily and will be spoiled as layers if they are overfed. If young pullets have a good range on which to exercise they can eat all they wish of a balanced ration and they will grow and feather rapidly but not take on a heavy fat as is the case with old hens, especially of the American breeds like the Plymouth Rocks.—K.

PATCHING A BROKEN PIPE

When starting my large hot-water brooder this season, I discovered that not all the water had been drained out of the system the season before, with the result that freezing had caused the long pipes to split in three places. To replace the pipes would have been a difficult and tedious job. They were repaired in the following way: A coating of thick paint was smeared on the pipe for some distance around the crack. Then a patch cut from the top of an old rubber overshoe, large enough to extend nearly around the pipe, and an inch each way beyond the split, was laid on, rubber side in. Beginning at one end, this was bound on with tarred string, wrapping as tightly and as closely as possible. The patch held perfectly.

By using a piece of rubber belting, a similar patch will prove effectual even when there is considerable pressure. The tighter the cord is wrapped, the better the patch will be.—R. L. Scharring-Hausen.

COUNTY NOTES

Cattaraugus Co., N. Y., (W) August 16.—After a late, wet spring, this section harvested a bumper crop of hay. On most farms the corn is very good considering the late planting. Oats are very poor. Potatoes are very poor because of six weeks of very hot, dry weather. Grasshoppers are doing a great deal of damage. The recent welcome rains and cool weather may improve the oats and potatoes. Many cut oats early and made them into hay because of the damage by weather and grasshoppers. There are no apples here and not much of any other kind of fruit. Berries were a good crop. This is a great dairy section, so with plenty of ensilage corn and good hay, the dairymen have viewed the lack of other crops with less concern, and the Dairymen's League will see that we get a fair price for our milk. Feed is very high and pastures have been dry. Dairying had a hard row, but the best dairymen came thru and are still sticking to the business.—Reader.

Mifflin Co., Pa., (SC) August 15.—Weather fair for over a week which gave the farmers a chance to finish hauling in the oats. The crop was damaged much by the heavy storms. Some farmers cut oats with the mower and lost much of the grain, what was not damaged is yielding 45 and 50 bushels. Wheat yielding from 18 to 30, there being a large amount of straw. Where the barns were small farmers were obliged to thresh some wheat to get room for oats. Plowing is being done, ground in fair condition. Corn crop is looking good so far. Old corn selling at $2.25. Potato crop not very good on account of too much heavy rain in planting and working time the ground got very hard. Potatoes selling from 70 to 90c a peck. On account of so much rain pasture is good and stock doing well. All kinds of produce in great demand and prices high. Apples selling at $1 bushel; eggs, 45c; butter, 55c. Farm labor still scarce on account of the public works. Some farmers buying tractors.—J. H. Byler.

Lebanon Co., Pa., (SE) August 18.—August has been fair and seasonable thus far. Wheat and oats are all harvested and in many cases threshed. Wheat yielded better than expected, tho not up to normal. Oats yielded fairly well. Plowing for the fall seeding is well under way, many of the large farmers using tractors. Tobacco is growing rapidly and will be a fine crop. Cutting has started in some sections. Corn is looking exceptionally well and promises a bumper yield. Cows are selling at very high figures, $200 being considered only an average price for a cow of medium quality. Our farmers went on their annual auto tour this week visiting with the county agent several farms in various parts of the county. An interesting and enjoyable time was had. Eggs, 48c; butter, 70c lb.; potatoes, $1.75; corn, $2.10; wheat, $2.20; oats, $1 bu.—Leonard F. Strickler.

CHESTER COUNTY HOLSTEIN BREEDERS MEET

The mid-summer meeting of the Holstein Friesian Breeders' Association of Chester County was held at Lenape Park, August 9. This flourishing organization has had a steady growth and its membership includes some of the most progressive dairy farmers of Chester and Delaware counties. According to the state census of last year, Chester County has more dairy cattle than any other county in the state. F. C. Brinton, Jr., was elected president and Charles J. Garrett, secretary.

BERKS COUNTY SWINE SALE

The Berks County Live Stock Association will hold its second annual consignment sale of pure-bred swine at the Fair Grounds, Reading, Pa., September 19. The sale will be held in connection with the Reading Fair. Sale starts at 1.30 P. M. The first sale, held last year, was a decided success and every effort is being made to give purchasers an equal or better opportunity this year. For full particulars address Geo. H. Rohrer, Secretary, Mertztown, Pa.

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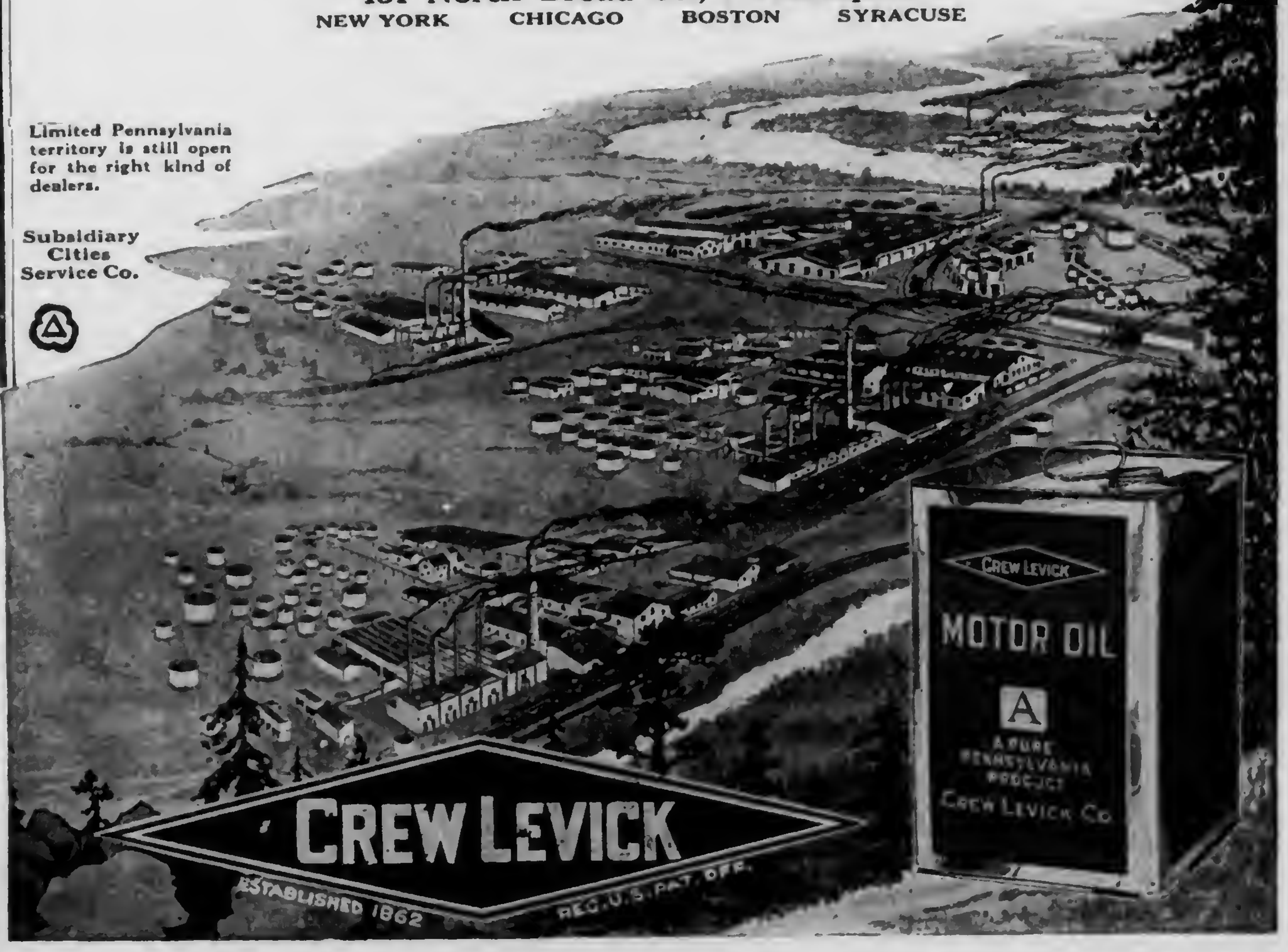

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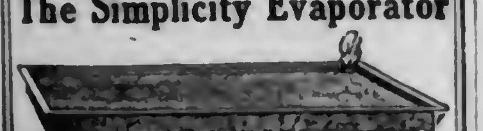

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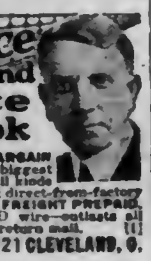

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The Courageous Coward

By ROLAND ASHFORD PHILLIPS

"Don't know me, do you?" the man asked.

The girl stared at the slouched form, at the peaked, beard-covered face and shrank nearer the wall. A moment ago he had come swaying down the trail and half fainted on the step.

"I'm Martin," he resumed, after the interval. Ruth's heart all but ceased beating.

"You — you're Martin?" she gasped. The other nodded.

"Yes. That's me. And I've come all the way from camp. I've walked and run and crawled these twenty miles since morning. And I've got to get back tonight."

"You're—a murderer," the girl went on, struggling against an overpowering desire to faint. "You killed old Ted last week. And now—now you've broken out of jail."

"Right again, little woman," he returned with a grin. "I'm it. But maybe—maybe you can get me something to eat. Haven't had a bite since last night. And—and it's a long tramp back."

Without a word Ruth groped along the wall toward the cupboard, setting out the crude, cold fare that had awaited her father's return.

"All alone?" the man spoke up bluntly, while he devoured the crisp, cold bacon. Ruth nodded. It was better to tell the truth.

"Dad's at camp," she explained. "But he'll be home before dark," she added, as an afterthought. The man glanced nervously about.

"I—I got to get back to camp—before morning, girl." He took a deep drink of cold tea. "Got a horse—maybe?"

"You'll have to ask Dad," she faltered. Martin shrugged his shoulders and frowned.

"Can't wait that long. It's twenty miles down the trail—and I want an early start. If you don't mind I'll just borrow one and"—he started to his feet and lurched toward the open door. With a heart that choked in her throat Ruth whirled about and gripped the revolver from the holster on the wall.

"Sit down!" The shrilly pitched voice caused the man to turn in a flash. At the sight of the leveled revolver he sank wearily into a chair.

"What's this for?" he finally broke out.

"You're going to stay here and wait for Dad," the girl returned. "He'll take you back to camp—in a hurry, I reckon."

"You—you ain't going to make me stay until then, girl," he answered evenly. "I got to get back—right away. I got to save a man's life. A life of an innocent man, girl."

"I—I don't believe you! You're trying to get to the railroad and escape from the country!"

"Listen to me, girl," Martin came back. "I killed a man, and I guess there's a price on my head, but no matter how bad I am, I'm not going to see an innocent fellow suffer. I broke jail, and he'll be responsible for it. I didn't think much about it at the time; but if I don't show up before morning—it'll go hard with the fellow. The boys are desperate and not responsible. I just got to get back there. You won't make me wait until your Dad comes, will you, girl?"

The gun slipped from Ruth's fingers and clattered to the floor. The first color showed in her cheeks.

"You—you going to give yourself up—to save the other man?" she stammered? "You're going to do that?"

"I'm guilty. 'Tain't right to make the boy suffer."

"I didn't think any man would do that," she went on. "Why—you're going back to camp—to die! You're free now. Suppose they did hang the boy for letting you get away—do men—like you care?"

His face wrinkled curiously and he fumbled for the space at his torn, black shirt.

"I guess, sometimes, when men like me are in a tight hole—we get to thinking, thinking pretty hard. I killed old Ted in self-defense, but the boys won't believe that, and there's no one to prove it. Besides, you can't blame them, either, cause Ted was one of them, and I was a stranger!"

"You—can take either one of the ponies — outside," Ruth wavered. Better get away before Dad comes."

The man straightened. "Thanks," he answered, simply. And coming erect to his feet he stumbled slowly across the floor.

An abrupt recollection flashed to Ruth's mind and she put out an arm to his shoulder.

"You've never been down the trail before, have you?" she asked. The man turned and shook his head.

"Then you can't make it—alone!" Martin shrugged his big shoulders and went on out into the yard. Ruth followed. At the gate where both the ponies grazed he turned and faced the girl.

"What you following for?" he asked, sharply.

"You can't ever make it to camp—alone," she answered quietly. "I'm going along. We got—got to save the man, haven't we?"

For the moment Martin stood there, dumb with amazement; and then, with an angry sweep at his eyes he put out his hand.

"God, but you're a brave little woman," he choked.

II.

They plunged straight from the yard into the deep, shadow-filled gully.

After an hour's ride they crossed a low, log-built bridge and she waited for the other to come up, while her pony drank deep of the swift-running stream.

"You're—very quiet, little woman," Martin spoke up, breaking the silence that had lasted between them since the start. "Thinking, are you?"

Ruth looked up from the stream and nodded. "Just thinking how brave you are—and how cowardly I am," she answered.

But the man laughed. "Cowardly? A girl who can guide a man down these rocks—in the night—ain't a coward to my way of thinking." He leaned forward, suddenly serious. "Did any one ever call you that—a coward?"

"Howard called me that!" came her reply. He raised a clenched fist and brought it down upon the saddle.

"I'd of liked to have been around at the time," he burst out so earnestly that the girl drew back in amazement. Then they rode on.

"Tell me about it," he begged, urging his pony alongside of her. "Will you?" Ruth felt a strange bond of sympathy for this brave, unconcerned man who could ride so lightly, so carelessly to his death.

"Howard and I were to have been married—last week," she began slowly, her eyes upon the pony's drooping ears. "I had all my clothes ready for the wedding. I was so happy—so foolishly happy. . . . And then, one night Howard fell into a gully and tore his side terribly. He asked me to bind it up. The sight of all the blood and the dirt and the horrid wound sickened me. . . . I fainted. When I awoke he laughed at me, and said I was a miserable coward. I told him to go away, and never, never speak to me again. I went back with all the pretty clothes—and cried all night."

Martin did not reply for an interval, and only the steady pound of the horses' hoofs broke the silence. Then he looked up.

"What was his name—his full name?"

"Howard Blake," she replied, and to hide the tears that forced themselves unbidden from her eyes, she urged the pony ahead.

It was while jogging wearily through a dark cut, and chancing to glance ahead, where the trail swept out into the light, that Ruth uttered a sharp cry and reined in her mount.

"Dad's coming!" she exclaimed. "He musn't see us. He— he wouldn't understand!" And obeying her summons the man followed her quickly into the dense undergrowth that lined either side of the road.

The approaching horseman jogged steadily down toward them. In the shelter of the brush both Ruth and Martin waited, anxiously. The father might have passed, wholly unsuspecting had not one of their ponies stamped unexpectedly:

Out on the trail the horseman reined in and his voice came in the silence.

"Who's there? Speak up!"

Ruth's trembling, numb fingers found the other's arm. An age seemed to pass before she dared breathe. And then came the shot, ringing like a bell from wall to wall. Martin lurched and swore. The girl's heart took a sudden throb and threatened to stop beating.

"You hit?" she choked, feeling her throat tighten at the words.

"Just a bare scratch—on my arm—that's all," Martin returned. The horseman, evidently satisfied at the ensuing silence, rode on. Almost an hour the two waited among the deep shadows, speaking only in whispers, and then but seldom. Finally they made their way out and went slowly up the trial. The next hour dragged. Ruth's poor little head and body began to ache and throb dreadfully. Somehow Martin seemed to lag behind more than usual, and to aid him, where the trail was faint, she held back the pony and waited.

When, half an hour later, they reached its level, she allowed her pony a rest and a deep, refreshing

drink, turning to watch the man approach. An abrupt determination came to her.

"I think it would be better if—if I bound up your arm," she declared, conscious that he swayed limply in his saddle. "I'm afraid the loss of blood is—weakening you."

"You! You—think you can?" he managed to return, faintly.

In answer she slipped stiffly from the saddle, bent over the stream and wet her handkerchief in the cold water. Straightening, she started to bare his arm. With a little choke in her throat she fell back.

"Man, man!" she broke out, her pulses throbbing, her very knees weakening. "You said—it was only your arm! Look! Look! Your side——"

The man laughed in a pitiful, futile attempt to ease her fears. "It ain't much," he hurried, clapping a hand to cover the ugly, bleeding gash that showed distinct in the faint light. "Never you mind, girl. It isn't pretty to look at, either It'll make—you sick."

The sight of the dripping blood unnerved her and she put out a hand to the saddle in order to keep herself erect. And yet, somehow, with almost unnatural courage she managed to get his hand away, to bathe the wound and then to carefully, tenderly bind it up with torn strips of his shirt.

When she had finished the man put out a timid, cold hand to her throbbing head. "You—you're a bully little woman," he gasped, and his words served to strengthen her wondrously.

The sun came higher and higher; the canon walls grew more and more distinct.

"Would—you mind riding—longside?" the man spoke up again at length. "Just keep—a hold on my arm. I'm a—bit dizzy. Funny, ain't it?"

Ruth obeyed, dumbly. And for a long time they went on and on, the trail steadily widening, until, finally, at a sudden turn the girl uttered an exclamation.

"Look, look!" she cried. "There's the camp! Don't you understand? It's the camp! We're here, before sunrise!"

Martin swayed drunkenly in his saddle as he lifted his head. But in his eyes there shone a great light.

"You—you got me here—in time to save—the boy, didn't you?" he whispered, hoarsely. "Just in time. He won't ever call you a—a coward—now, little woman—not now——"

"What do you mean?" she interrupted, while he grew heavy on her arm. "What do you mean?"

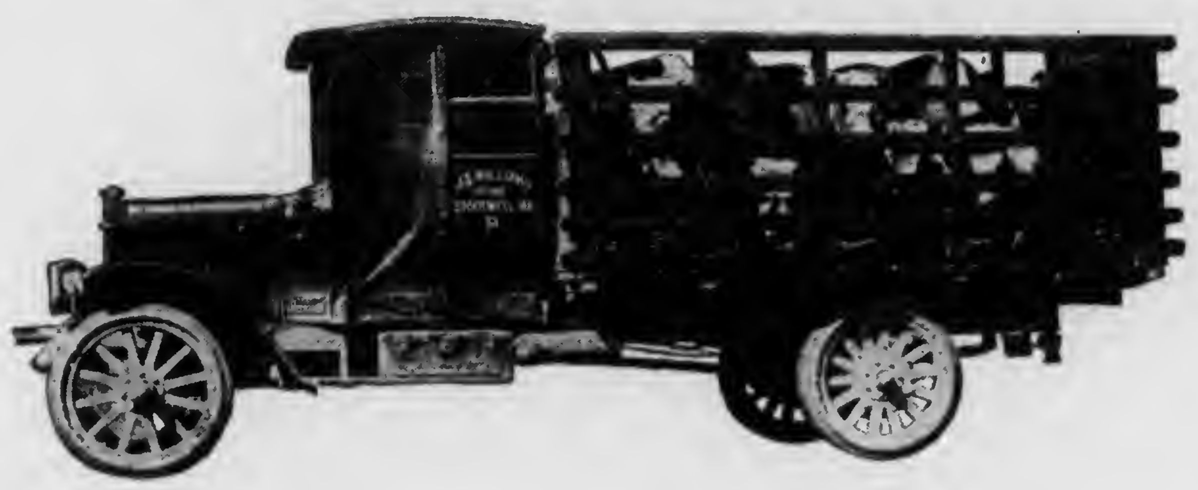
Martin groaned and toppled from his horse full across her saddle. Like a woman possessed she clung to him madly and went on. His lips were moving, and she bent down to catch the half incoherent words:

"It's Howard Blake — you've saved," he murmured, his thin, white lips smiling. "He was the man who—was watching me. I guess—we've got here—just in time——"

Looking up through her tears, with the body of the man held before her and dragging like a leaden thing upon her arms, she saw a crowd of men running toward her, and at their head, bareheaded, was Howard.

She gasped a few, mumbled sentences, and the fearful strain over, it was his arms that caught her as she swayed forward, and it was his eager, trembling words that rang so sweetly in her ears.

"Brave little woman," he said. "God bless you!"



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Markets

PHILADELPHIA PRODUCE

Philadelphia, Pa., August 25, 1919.

The supplies of potatoes are much heavier today than they were a week ago and prices are ruling quite a little lower. Most of these supplies are New Jersey grown and only a comparatively few Eastern Shore potatoes are now left. Most of the New Jersey Giants (long stock) are selling at $4@4.25 per 100-pound sack, with a few at $4.50 per sack. The Cobblers (round stock) are selling at $5@$5.25 per 150-pound sack. The Southern barreled potatoes sold today at $5@5.50 per barrel for No. 1s, with No. 2s and culls at $2@$3.50 per barrel. The potatoes hauled in by the nearby New Jersey farmers sold mostly from $1.25@1.30 per ⅝ bu. basket, with a few at $1.35 per basket, while under grades sold from 60c@$1.15 per basket.

Swet potatoes are now in very liberal supply and prices are not half as high as they were a week ago. The Eastern shore of Virginia is supplying the bulk of sweet potatoes now on the market, altho a few are still coming from North Carolina, and the New Jersey crop is beginning to show up quite freely. The Eastern Shores sold at $4@4.50 per barrel for primes or No. 1s, with No. 2s at $1@2. The New Jersey sweet potatoes sold at $1@1.50 for No. 1s and 65@85c for culls.

Vegetables

The market on both green and wax beans is showing practically no change from last week. Supplies have been moderate but the quality has been mostly ordinary and poor, which has had a tendency to keep prices lower than would have prevailed had the beans been strictly fancy. The green beans are now selling from 75c@$1.50 per ⅝ basket, while the wax beans which are still poor in quality are ranging from 50c@$1.25. There have been some New York state beans on the market, but they showed poor quality and condition and sold at very low prices. Beets are much lower than they were a wek ago. Supplies are quite liberal, and demand and movement slow at 1½@2½c per bunch. Loose beets in bushel hampers are selling slowly at 75c, while barrel beets bring from $1.25@1.75. Carrots are also lower under the heavier supply and moving slowly at 1@2c per bunch. Cabbage is showing little or no change with good stock ruling from 50@65c per ⅝ basket. Fancy large celery is firmer and higher, selling readily from 50@75c per bunch, but small celery is weak at 25@40c per bunch, these prices covering sales of New York and New Jersey stock. Some celery coming from Michigan is selling from $1.50@2 per crate.

Corn fluctuates from day to day. Since our last report some very low prices have been prevailing, but today under light offerings the market has reacted and prices are now almost as high as they were a week ago. Sales today range from 50c@$1.40 per ⅝ basket on New Jersey corn with Pennsylvania selling from $1@3 per 100 ears. There is another improvement noted in cucumbers, fancy New Jersey stock selling up to 85c per ⅝ bu. basket., while poorer sold at lower and irregular prices as to condition. A car of New York state cucumbers sold this morning at $1.10@1.50 per bu. with dills at $1.75 per bu. The decline of 25@50c per basket on eggplants as noted in these columns last week has been followed by a still greater decline this week and good plants are now selling at 49@60c per basket, these prices being fully 50@65c lower than those prevailing a week ago. The lettuce market has been showing a lower and easier tendency every day since our last report, and prices are now averaging about a dollar a box lower than a week ago. At this writing most lettuce in boxes is selling from $1@1.25 with the best at $1.50 a box while some very poor sold as low as 50@65c a box. Hamper lettuce sold mostly from 75c@$1 per hamper. Onions are showing very little change, moving very slow and draggy with New Jersey selling at $1.25@1.50 per ⅝ basket for best onions, with poorer grades from 75c@$1 per basket. Western onions range from $2.25@4 per 100-pound sack, as to size, quality and condition. White onions in bushel hampers are unchanged $1.50@2.75 per hamper.

Lima beans while a little plentiful are still far from being ample for the requirements. While prices are a little lower, good values are being obtained on fancy stock. ⅝ baskets sold today at $2.75@3.25, while bushel hampers ranged from $4@4.75. Fancy small okra are bringing the fine price of $2@2.50 per basket, while the large ones are hard to sell at 75c@$1 per basket. Parsley is in light supply and firm at $1.25@2.50 per 100 bunches. Peppers are quite a lot lower than they were last week under supplies that have been very liberal and they are now selling at 25@35c per ⅝-bushel basket. Squash is also very plentiful and is moving very slowly at 15@25c per basket. New Jersey Tomatoes are selling at lower prices for the ordinary run, sales are made mostly at 50@90c per basket for No. 1s with culls at 25@50c. Strictly fancy tomatoes are in light supply and selling at about the same prices as last week, viz., $1@1.50. A few fancy Pennsylvania tomatoes sold today as high as $2 per basket. Turnips are a little firmer when fancy at 50@65c per basket with ordinary unchanged from 35@45c.

Fresh Fruits

Altho a few apples are being received on our market from distant points, supplies from nearby New Jersey and Pennsylvania points continue about ample for all requirements. These nearby apples are ruling steady at practically unchanged prices, good hand-picked No. 1 apples selling from 75c@$1.50 per ⅝ basket, with No. 2 apples at 50@75c, and culls and windfalls at 25@50c. A car of Duchess apples sold today at the depot at $1.25@1.50 per bushel, with barrels at $4.50@6. There were three cars of New York state pears here today. Bartletts, selling at $6.50@9.50 per barrel and $2.50@3.50 per bushel. Clapps Favorites sold at $6@9 per barrel, while the bushel baskets sold at $2@3, and kegs containing about a bushel brought $3.25 per keg. The only peaches on our market today were from New Jersey and these sold at $1.50@2.50 per crate, while the baskets sold at 60c@$1.25 for the yellow fruit and 40c@$1 per basket for the white fruit. Liberal supplies have been coming from Delaware, however, and these have ben selling at about the same values as the New Jersey peaches. Cantaloupes are showing very little change from last week. The offerings from Delaware and Maryland are mostly poor and sold around 50c@$1 per crate for standards, with Jumbos from 75c@$1.25 per crate, with flats at 50@65c. Western cantaloupes are also poor, selling from 75c@$1.75 per crate as to quality and condition. The New Jersey cantaloupes are in much heavier supply and lower best selling at 50c@$1 per ⅝ basket, with culls at 25@35c per basket. Watermelons from Maryland, Delaware and Virginia are in very liberal supply and selling low, ranging from $100@275 per car as to size, fancy large watermelons bringing out side prices, while the low values are received on small poor and spotted and wasty melons. Huckleberries are steady when fancy at 20@23c per quart, but many are poor, wet and soft and some sold as low as 12c per quart today. Blackberries are also firm when fancy at 18@21c per quart. Quite liberal supplies of Delaware grapes are now on the market and selling at 14@16c per pony basket when fancy, but many are showing effects of warm and wet weather and sell as low as 10@12c per basket.

Poultry

Altho the supplies of live poultry have been fairly liberal during the past week, there has been a good active demand which kept supplies pretty well cleaned up from day to day at practically unchanged prices on fowls, with chickens ruling about steady at slightly lower prices. Today live fowls sold at 36@38c per pound and spring chickens at 35@39c while Leghorn springers sold at 28@32c per pound. Old roosters were unchanged from day to day at 24@25c per pound. Ducks have ruled steady at the recent decline selling generally at 28@30c per pound for young spring ducks while the old ducks were rather slow at 26@28c per pound.

Eggs

There is practically no change in the egg market. As usual at this time of year, many of the supplies of eggs will not grade up to standard and this class of eggs is moving out slowly at irregular prices as to quality and loss shown. Strictly fancy eggs are rather scarce and such are at full quotations and in most instances are bringing a premium over quotations, as follows: Pennsylvania and other nearby current receipts, 50c; nearby firsts, 52c; nearby fair and good, 40@48c; seconds, 42@45c; Western eggs, 48@52c.

LANCASTER PRODUCE MARKET

Lancaster, Pa., August 25, 1919.

Forestallers succeded again today in plying their trade without interruption, and eggs in an hour advanced from 58to 65 c a dozen. Peaches were offered in enormous quantities and were slightly lower than last year. Corn and tomatoes were also offered in large quantities. Butter was scarce and high.

Butter and Eggs.—Country butter, 70c lb.; creamery butter, 65c; fresh eggs, 60@65c per doz.; duck eggs, 50c; goose eggs, 10c each.

Poultry.—Dressed old chickens, $1.75@2; dressed young chickens, 90c@$1.25 each; old live chickens, 28c per lb.

Vegetables.—Corn, 10@20c doz.; beets, 5c bunch; beans, 10@12c ½ pk.; tomatoes, 6@8c box; lima beans, 50c qt.; do., 20@25c lb.; cauliflower, 10@15c head; cabbage 5@10c head; sweet potatoes, 35c ½ pk.; potatoes, $1.75@2 bu.; do., 25@30c ½ pk.; turnips, 15c ½ pk.; spinach, 20c ½ pk.; lettuce, 15@20c head.

Fruit.—Apples, 15@35c ½ pk.; watermelons, 35@85c each; cantaloupes, 5@6c each; pears, 5@15c per box; peaches, $1.50@1.90 per basket; do., 10c per box.

Grain Market.—Wheat, $2.20 bu.; rye, $1.65; oats, 85c; corn, $1.95; timothy hay, $30 per ton; mixed hay, $28; wheat straw, $10; oat straw, $5.

YORK PRODUCE MARKETS

York, Pa., August 25, 1919.

There were few changes in market quotations this week. The dullness of the previous week extended into this, and increased in the line of apples. These are plentiful but of a very low quality, which brings down the price of good stock.

Eggs.—48@50c doz.

Butter.—Country, 45@55c lb.; separator, 65@70c lb. Milk, 10c qt.

Poultry.—Hens, 26@28c; springers, 30@32c lb.; dressed, 75@$2 each.

Vegetables.—Potatoes, 12@30c ½ pk. $1.50@2 per bu. Cabbage, 3@8c head. Lettuce, 3@6c bunch. Beets, 5c bunch. Radishes, 5c bunch. Onions, 5@10c box; 20@25c ½ pk. Lima beans, 40@50c qt. Soup Beans, 20@25c qt. Celery, 5@10c stalk. Rhubarb, 4@5c bunch. Egg-plants, 5@10c each. Beans, 10@15c ½ pk. Lard, 38@42c.

Fruit.—Apples, 10@50c ½ pk. Plums, 7@20c box. Peaches, 10@15c box; 30@50c ½ pk.; 50@$2 per basket. Cantaloupes, 10@15c each. Watermelons, 15@25c each.

Retail Grain Market.—Wheat, $2.40 bu.; corn, $2.35 bu.; oats, $1.10 bu.; rye, $1.65 bu.; bran, $3 per cwt.; middlings, $3.50 cwt.

Wholesale Grain Market.—Wheat, $2.20 bu.; corn, $2.10 bu.; oats, 97c bu.; rye, $1.40 bu.; bran, $54 per ton; middlings, $70 per ton.

BALTIMORE PRODUCE

Baltimore, Md., August 25, 1919.

Produce.—Potatoes, nearby No. 1, $3@$3.50 cwt. do., No. 2, $1.50@2. Cabbage, nearby, $3.50@8 per 100. Lettuce, 75c@$1 basket. Onions, nearby, $3@3.50 cwt. Cucumbers, 50@75c basket. Carrots, 1@3c bunch. Green beans, 75c@$1 bu.; do., wax, $1@$1.25 bu. Lima beans, $2.75@$3 bu. Beets, 2@3c bunch. Green corn, 15@20c doz. Tomatoes, 60@80c basket. Squash, 20@25c basket.

Fruit.—Apples, No. 1, $5@6 bbl.; No. 2, $2.50@4.50 bbl.; $1@2 bkt. Huckleberries, 20@23c qt. Cantaloupes, 50@60c basket. Peaches, $1.50@3 bu.; 75c@$1.50 basket. Watermelons, $25@40 per 100. Pears, $2@2.25 bu. Crabapples, 50@75c basket.

Butter.—Creamery, western fancy, 57@58c; choice, 55@56c; pound prints, 58@60c. Nearby rolls, 46@48c. Dairy prints, 46@48c.

Eggs.—State, Pennsylvania and nearby, 48@49c; Eastern Shore and Virginia, 47@48c; Southern, 46@47c.

Live Poultry.—Springers, 35@38c lb.; old roosters, 21@22c; old hens, 34@35c lb.; ducks, young, 28@30c; do., old, 25@26c; guinea fowls, 90c@$1.

Grains.—Wheat, new No. 1 red, $2.38¾; do., No. 2, $2.35¾; do., No. 3, $2.31¾; garlicky, $2.29@2.36¾. Corn, bag lots, No. 3, $2.05@2.10 bu. Oats, standard, white, 88@89c. Rye, nearby, $1.45@1.50.

Hay.—No. 1 timothy, $38@39 ton; do., standard, $37@37.50 ton; light clover, mixed, $33@35 ton. Clover, mixed, $31@34. Clover, clear, $26@29 ton. Tangled rye straw, $12@14.50. Wheat straw, $10@11.50 ton. Oat straw, $12@14 ton.

Mill Feeds.—Winter wheat bran, $63 ton; brown middlings, $63 ton; white middlings, $73 ton; Western spring bran, $48@$49 ton.

NEW YORK PRODUCE

New York, N. Y., August 25, 1919.

Butter.—Irregular; receipts, 9,581; creamery, higher than extras, 56½@57c; creamery extras, 55¾@56c; firsts, 52½@55½c; packing stock, current make, No. 2, 46c.

Eggs.—Steady; receipts, 11,235; fresh gathered, extra, 54@55c; extra firsts, 51@52c; firsts, 47@50c; state, Pennsylvania and nearby western hennery whites, fine to fancy, 68@70c; do., ordinary to prime, 50@65c; state, Pennsylvania and nearby hennery browns, 58@62c; do., gathered browns and mixed colors, 53@56c.

Cheese.—Steady; receipts, 3,590; state, whole-milk flats, current make specials, 30½@31c; do., average run, 29½@30c; state, whole-milk twins, current make, specials, 30½@31c; do., average run, 29½@30c.

Vegetables.—Potatoes, Long Island, $4.50@5.25 per 165-lb. bag; Jersey No. 1, $4.50 bag; No. 2, $2.50. Beans, green, 50c@$2 basket; do., wax, 50c@$1.50 basket. Beets, $1.50@2.50 per 100 bunches. Carrots, $1@2 per 100 bunches. Cabbage, $4@8 per 100. Lettuce, 50c@$2 basket. Tomatoes, No. 1, 50c@$1.25 box; culls, 25@60c.

Fruit.—Apples, $1@$2.25 basket. Peaches, $1@2.25 crate; Jersey, 75c@$1.50 crate. Blackberries, 15@22c quart. Huckleberries, 10@20c quart. Muskmelons, $1@$2 crate.

PHILADELPHIA LIVE STOCK

Philadelphia, Pa., August 25, 1919.

Receipts of live stock for week ending August 23 were as follows:

	Beef Cattle	Sheep and Lambs	Hogs
Total for Week ...	1,017	6,048	4,464
Previous Week ...	1,426	4,259	4,345

Calves.—Receipts of calves last week were 1,574 head against 1,652 head week previous.

Beef Cattle.—Steers and cows ruled firm and higher under light offerings and a good demand. Calves were firmly held, with demand fair.

Steers.—Good to choice, $15.50@16.50; do., fair to good, $14@15.50; common to fair, $12.50@14; cows, fat, per lb., good to choice, cornfed, 9½@11c; fair to good, 7@9c; do., common to fair, 5@7c; bologna cows, 4½@5½; calves, extra choice, $23@24; fair to good, $20@22; common, $14@18; heavy, $8@12; Tennessee choice, $18@20; other southern, $8.50@12.50.

Sheep and Lambs.—The market for sheep ruled steady under moderate supplies and a fair demand. Lambs were dull and lower, with supplies in excess of requirements. Sheared wethers, extra, $11@11.50; good to choice, $9.50@10.50; medium, $7.50@8.50; common, $4@5; ewes, fat, heavy, $8@9; spring lambs, choice, $17@17.50; medium, $14@16; culls and common, $8@11.

Hogs.—Offerings were light and the market ruled firm and higher, with demand fairly active. Western advices were stronger. Quotations for best westerns, $23.50@24; Pennsylvania and Maryland, $22.50@23.

City Dressed Stock.—Steers, heifers and cows were dull and easier. Calves were in fair demand and slightly higher. Hogs ruled firm at quoted rates. Quotations—Steers, 17@25c; heifers, 18@23c; cows, 12@18c; dressed, choice, 29@31c; country dressed 25@27c; sheep, 20@23c; lambs, spring, 28@32c; hogs, 30c.

LIVE STOCK MARKETS

Pittsburgh, Pa., August 25, 1919.

Cattle.—Steady; supply, 110 loads; prime, $16.25@16.75.

Sheep.—Strong; supply, 22 double decks; prime wethers, $10.50@11.25; culls and common, $3@5; lambs, $14@16; veal calves, $21@22.

Hogs.—Steady; supply, 20 double decks; prime heavies, $21.75@22; mediums and yorkers, $22.75@23; light yorkers, $21.75@22.25; pigs, $21@21.50; roughs, $18@19.50.

New York, August 25, 1919.

Beeves.—Receipts, 4,570; steady; steers, $10@17.90; bulls, $6.50@8.75; cows, $3.60@10.75.

Calves.—Receipts, 4,870; steady; veals, $18@25; culls, $14@17; skim milks, $11@13.50; fed calves, $14; westerns, $13@16.50.

Sheep and Lambs.—Receipts, 21,280; weak; sheep, $6@9; culls, $3@5.50; lambs, $10.50@17.50; culls, $7@10.

Hogs.—Receipts, 2,230; firm at $22.50; pigs, $21.50; roughs, $19.50.

PHILADELPHIA HAY AND GRAIN

Philadelphia, Pa., August 25, 1919.

Baled Hay and Straw.—Receipts, 168 tons of hay. Quiet and unchanged. Old timothy hay, according to location—No. 1, nominal; No. 2, $36@37; No. 3, $32@33. New timothy hay—No. 1, $37@38; No. 2, $35@36; No. 3, $31@32. Old clover-mixed hay—Light mixed, $36@37; lower grades, $31@35. New clover-mixed hay—Light mixed, $35@36; lower grades, $30@31. Straw—No. 1 straight rye, $13.50@14; No. 2 do., $12.50@13; No. 1 tangled rye, $13@13.50; No. 2 do., $12@12.50; No. 1 wheat straw, $12@12.50; No. 2 do., $11@11.50; No. 1 oat straw, $12@12.50; No. 2 do., $11@11.50.

Bran—In small supply and quiet at former rates. Car lots including sacks, soft winter bran, city mills, in 100-lb. sacks, per ton, $52; western soft winter bran, in 100-lb. sacks, per ton, $49@50; spring bran, in 100-lb. sacks, per ton, $48@49.

NEW YORK HAY AND GRAIN

New York, August 25, 1919.

Feed.—The market for mill feed was inactive and in a waiting position. Buyers and sellers were apart and there seemed to be a general disposition to limit operations until the situation clears up. Buyers were rather inclined to expect increased offers, but so far mills have not shown much disposition to sell freely, and it is believed that they are finding a good outlet nearer home.

Quotations—City feed, bran, $48; middlings, $58 in 100-pound sacks; red dog, $69; nominal, in 100-pound sacks; Western spring bran, $47.50@48; standard, middlings, $59.50@61; flour middlings, $64@65; red dog, $73@74, all in 100-pound sacks, 30-day shipment. Oat feed, $31@32; rye middlings, $48; white hominy feed, nominal, all in 100-pound sacks. Cottonseed oil meal, nominal; linseed oil meal, nominal, in 100-pound sacks.

Hay and Straw.—Supplies are more than ample at all harbor points; trade continues slow but market is without quotable change, with outside quotations generally ruling extreme. Rye and oat straw scarce and firm.

Hay.—No. 1 large bales, $45@46 ton; No. 2, $43@44 ton; No. 3, $40@42; shipping, $36@38 ton. Fancy light clover mixed, $42@43 ton. Clover, No. 1, mixed, $39@40.

Straw.—Per ton, No. 1 rye, $15@16; No. 1 oat, $12@13.

Wheat.—No. 2 red, $2.37½; No. 2 hard winter, $2.37½.

Corn.—No. 2 yellow, $2.10¼; No. 3 yellow, $2.09¼.

Oats.—No. 2 white, 86c; No. 3 white, 85c.

Rye.—Export, $1.66.

PHILADELPHIA DAIRY MARKET

Philadelphia, Pa., August 25, 1919.

Butter.—Receipts, 1,317 tubs. As usual on Saturday the wholesale market was quiet and prices showed no important change. Fresh, solid-packed creamery, extra, 57c; high scoring goods, 58@60c, the latter for jobbing sales; extra firsts, 56c; firsts 52½c@55c; seconds, 50@52c; thirds, 47@49c; sweet creamery, choice and fancy, 59@61c; do., fair to good, 54@58c; ladle-packed, as to quality, 47@48c; packing stock, 45@46c; fancy brands of nearby prints jobbing at 62@64c.; good to choice, 57@61c; fair, 52@55c.

Cheese.—Quiet and barely steady. Quotations; New York and Wisconsin flats, current make, 32@32¼c; specials higher; fair to good, 30@31c; jobbing sales of fancy goods, 33@34c.

NEW YORK MILK MARKET

New York, N. Y., August 25, 1919.

Cool rainy weather the first part of the week hurt the demand and trade was very slow, closing more active. Surplus was large enough to keep most of the manufacturers busy. The rate for August is $3.13 per 100 lbs. for 3 percent milk in 200-mile zone; add 4c per 100 lbs. for each one-tenth of one percent extra butterfat.

Receipts of milk and cream in 40-quart cans for the week ending August 23, 1919, were as follows:

Railroads	Milk	Cream
Erie	40,122	4,270
Susquehanna	5,846	86
West Shore	14,122	2,100
Lackawanna	6,028	3,010
N. Y. Cent. (long haul)	147,269	3,619
Ontario	44,120	1,963
Lehigh Valley	43,768	1,531
New Haven	6,575	69
Pennsylvania	12,062	486
Other Sources	6,200	200
Totals	326,112	17,334
Same week last year	414,937	20,451

WOOL MARKETS

The Boston Commercial Bulletin of August 23 says: "The market for wool has been dull for the most part during the week, although there is a fairly good demand for choice fine staple wools. The strong undertone is keeping prices generally firm.

"London closed with prices 10 percent above opening rates on all grades above fifties.

"The manufacturing situation here and abroad is exceedingly strong."

Ohio and Pennsylvania Fleeces.—Delaine washed, 88@90c; delaine unwashed, 82@86c; fine unwashed, 68@70c; ½-blood combing, 80@81c; ⅜-blood combing, 70@—c.

Michigan and New York Fleeces.—Fine unwashed, 63@64c; delaine unwashed, 78@82c; ½-blood unwashed, 76@78c; ⅜-blood unwashed, 68@69c.

Wisconsin, Missouri and Average New England.—One-half-blood, 72@75c; ⅜-blood, 67@68c; ¼-blood, 65@66c.

Virginia, Kentucky and Similar.—One-half blood unwashed, 81@82c; ⅜-blood unwashed, 73@75c.

TOBACCO MARKET

The dreaded hailstorm in all its fury was experienced in several localities and accordingly many Pennsylvania localities are minus what was a few days ago an excellent prospect for a tobacco crop. In some places the hail amounted to veritable chunks of ice and many tobacco fields were fairly beaten into the earth and will not afford a salvage save the fertilizing benefit from plowing under the ruined plants. It is said that but few of the losing growers carried hail insurance, but it is probable that the present situation will be a warning that will influence future action in this particular. It is said that during these storms the temperature dropped some 17 degrees. At a meeting of the tobacco growers' organization special stress was placed on the danger of topping too low with the consequent delay in maturity, some one imparting the unwelcome information that frost will be unusually early this fall. On just what authority such prediction is volunteered was not given. However, the advice was commendable, granted that plants may be topped to bear not less than 8 to 10 leaves. For very small plants it is better to leave them to grow unhindered even into cutting time, as they will make more and better tobacco than if topped. According to reports at this meeting, the outlook is decidedly variable and upon the whole slightly below an average for the time of year.

HOUSEHOLD

SANDWICHES FOR THE PICNIC

Careful preparation of a sandwich will have its reward in the appreciation of the eater. Cut the bread thin, have the bread just past the crumbly fresh stage, but do not have it dry. Wrap sandwiches in waxed paper and keep moist and clean. Have tasty fillings for your sandwiches and have a variety. Brown breads and nut breads make a pleasant change from the all white bread sandwiches.

Nut Bread for Sandwiches.—Three cups graham flour, 1 cup white flour, 1 cup molasses, 1 large cup of milk, 1 teaspoon soda, ¾ cup chopped nuts. Mix thoroly and bake 1 hour, having a slow oven during the first part of the cooking.

Boston Brown Bread.—One cup rye meal, 1 cup cornmeal, 1 cup graham flour, ¾ tablespoon soda, 1 teaspoon salt, ¾ cup molasses, 2 cups sour milk or 1¾ cups sweet milk. Mix and sift the dry ingredients, add the molasses and milk, stir until well mixed and turn into well-greased baking powder tins. Steam 3½ hours.

Deviled Ham Sandwiches.—One cup cold boiled ham, 1 teaspoon lemon juice, yolks of 2 hard-boiled eggs, ¼ teaspoon mustard, 3 tablespoons melted butter. Chop the ham fine, rub the egg yolks smooth with butter, mix with the ham, mustard and lemon juice, and season to taste. Spread on thin slices of white bread.

Sardine Sandwiches.—Skin and bone 12 sardines; cut fine, mix with 1 hard-boiled egg yolk, a small teaspoonful Worcestershire sauce, a little celery salt and a little minced sour pickle. Spread on white bread.

Cucumber Sandwich.—Slice cucumbers thin and put in salt water until ready to use. Butter thin slices of bread. Roll the cucumber in mayonnaise dressing and place between 2 slices of bread. These should be served as soon as possible.

Green Pepper Sandwich.—Thoroly mix 2 tablespoons salad oil, 1 tablespoon vinegar, 1 teaspoon salt, a little pepper, 1 small onion sliced fine and a chopped green pepper. Let stand 2 hours. Spread a slice of bread with cream cheese, add the green pepper mixture and the second slice of bread.

Sweet Sandwich.—Spread between very thin slices of brown bread a fruit marmalade and some cream cheese.

Cheese and Cress Sandwich.—Spread thin buttered brown bread with cream cheese, and lay on a few leaves of cress dipped in French dressing, made by beating together 3 tablespoons salad to 1 tablespoon lemon juice, and rounded teaspoon sugar, seasoned with a little paprika.

Nasturtium Sandwich.—Spread thin slices of white bread with butter and very tender nasturtium leaves and flowers, dress with a little mayonnaise. A plate of these sandwiches, garnished with flowers and leaves, would be very attractive for a porch luncheon or tea.

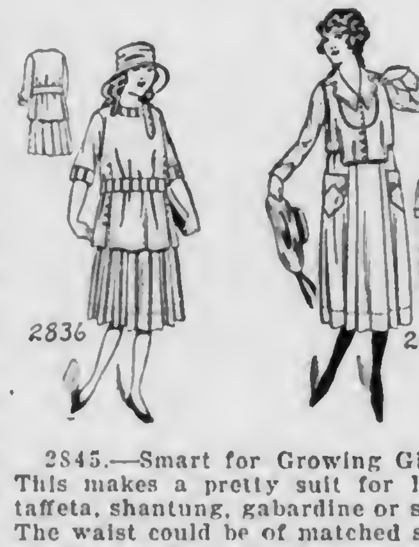
Club Sandwiches.—Arrange on slices of bread some fresh lettuce leaves, then slices of cooked bacon, cover with a slice of cold roast chicken, and last put on a thin slice of tomato covered with mayonnaise dressing, then the second slice of bread.

Egg Sandwiches.—Chop fine the whites of hard-boiled eggs; force the yolks thru a sieve, then mix whites and yolks, season with salt and pepper and moisten with salad dressing. Spread between slices of buttered bread.

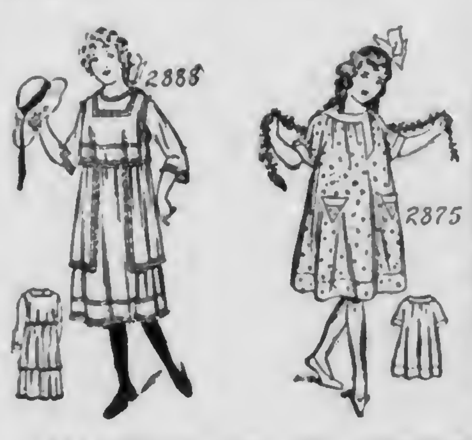
PENNSYLVANIA FARMER PATTERNS

Give figures and letters of each pattern exactly as printed at beginning of each description or we will not be responsible for correct filling of orders. Give bust measure when ordering waist patterns, waist measure for skirt, and age for children's patterns. Address Pennsylvania Farmer, 261 S. Third Street, Philadelphia, Pa.

2836.—Up-to-date Costume.—The growing girl will look trim dressed in this jaunty model. Drill, linen, khaki, or plain gingham would do for the blouse, with striped or plaid material for skirt and trimming.—The pattern is cut in 4 sizes: 8, 10, 12 and 14 years. Size 12 requires 3¾ yards of 44-inch material. Price, 10 cents.



2845.—Smart for Growing Girl.—This makes a pretty suit for linen, taffeta, shantung, gabardine or serge. The waist could be of matched satin, or of organdie. The design is also nice for gingham.—The pattern is cut in 3 sizes: 12, 14 and 16 years. Size 14 requires 5 yards of 44-inch material. Price, 10 cents.



2888.—Frock for the Growing Girl.—This is very appropriate for organdie, batiste, lawn, voile, crepe, dimity, dotted Swiss, china silk and linen. The tunic may be omitted. Lace, embroidery or ribbon could be used for trimming. This style is also good for combinations of material.—Pattern comes in 5 sizes: 6, 8, 10, 12 and 14 years. Size 12 will require 4⅝ yards of 44-inch material. Price, 10 cents.

2875.—Dainty Frock for Little Miss.—Figured voile or organdie, soft silk, lawn, batiste, dimity, dotted Swiss and challie may be used for this style. It is good also for gingham, chambray and percale.—The pattern is cut in 4 sizes: 2, 4, 6 and 8 years. Size 6 requires 2½ yards of 36-inch material. Price, 10 cents.

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Fashion Herd of Big Type Poland Chinas Spring boars sired by Giant Smooth Wonder and Ohio King 2nd.out of 700 and 800 lb. sows, real herd-header prospects. A few sows bred for fall farrow. These offerings are real ones, the kind that are worth while. C. S. EPPLEY, ZANESVILLE, O.

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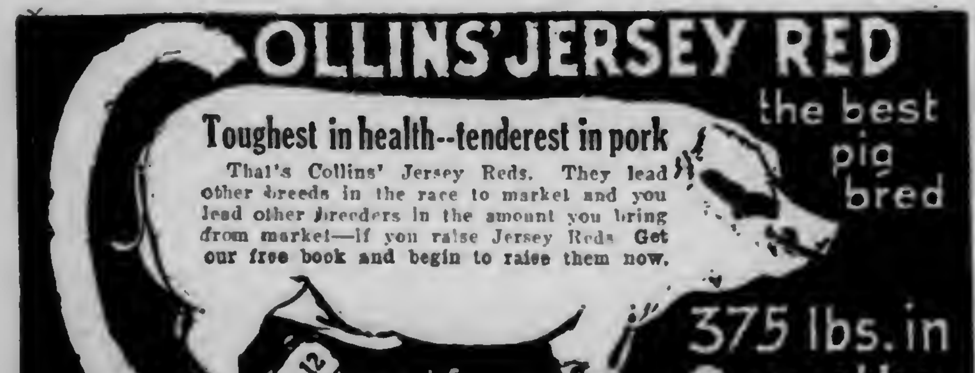

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PRACTICAL LIVESTOCK SANITATION

If we but follow the simple rules of practical livestock sanitation we will be surprised to learn how easy it is to keep our farm animals well. Avoid housing or stabling your livestock in dark, damp, badly-ventilated buildings. Furnish your stock with a good quality of food and water, and be sure that they have plenty of both. Then farm animals must have some daily exercise, even if it is only a short walk.

Many of the stables are entirely too small for the number of animals kept in them, besides the barns are too often located on low land, which, if not properly drained, are usually damp and decidedly unhealthy for stock. Many stables are poorly lighted and without sufficient ventilation. For sanitary reasons the floor of a stable should be composed of other material than wood. Every stable should be drained, cleaned out daily and disinfected once a week. It is a mistake to allow urine and excrement to remain in a barn for any great length of time. It should be hauled out onto a lot or deposited under cover some considerable distance from your stable. The well is often situated too near your barnyard. Drippings and leachings from the manure may make its way into the well and this infected water is almost certain to sicken and perhaps cause the death of some of the stock.

If possible keep your barnyard clean and avoid storing much manure in it at any time. For convenience some farmers throw droppings from stock out of stable window and here allow it to accumulate for a long time. This is decidedly unsanitary, especially if you keep cows.

Feeding stock badly-cured grain or fodder will frequently sicken them, producing a sort of forage poisoning. The underfeeding of livestock lessens their power of resistance to diseases. When livestock are stabled and deprived of fresh air, they will not thrive. Every barn should be equipped with ventilators. Fresh, outside air should be admitted and the foul air allowed to escape.

Disease is the functional or structural deviation from the normal or healthy standard. It is the condition that obtains where a being or animal is unable to adjust itself to its environment. The causes of disease may be divided into two groups, viz., predisposing and exciting. Predisposition to disease includes all conditions which diminish an animal's resistance and thus renders the animal subject to the specific exciting causes of disease. Here is where heredity is often charged with being the cause of the disease, or ailment. The most important active causes of diseases are of a parasitic nature and can be transmitted from one animal to another, from farm to farm, county to county, etc. In this way tuberculosis, glanders and many other infectious and contagious diseases have become world wide in distribution.

Immunity is that power of resistance possessed in some degree by every animal, and it is due to a combination of protective material substances that are much alike in all animals, with one exception, namely, that peculiar type known as natural immunity. It is rather strange that one animal sickens and another escapes the infection; however we usually find the strong robust, healthy animal is the one that survives. It must be admitted that this matter is none too well understood. We have but two kinds of immunity; first, natural which I have mentioned, second usually termed medical. Immunity is no longer a theory; it is a science fully as well understood as the pysiological actions of drugs.

Every farm should be equipped with a small building, suitable for hospital purposes, where sick animals can be cared for until they recover. This building can also be used for the detention of new stock until you ascertain if they are free from disease or not. This is an important step in the direction of preventing the spread of disease. Diseased animals are sometimes sold. You may be unfortunate in purchasing one of them. If you hold the animal in quarantine for three weeks it will generally determine whether they are diseased or healthy. Never allow the carcass of an animal to decompose on your farm. Either bury it deep, or burn it.

Familiarize yourself with the common symptoms of diseases, but when in doubt as to what the ailment is, promptly call your veterinarian, who should be qualified to make a correct diagnosis of the case.—Dr. W. C. Fair.

A BOOST IN HOG BREEDING

Two Pocomoke City banks, Worcester Co., Md., in April, 1918, financed forty boys thereby enabling each to buy a pure-bred sow pig. Three boys bought also pure-bred males. The best stock was selected and cared for under the direction of the Extension Department of Maryland College of Agriculture. There will soon be more than 200 pure-bred Duroc-Jerseys from the purchase. The sows are farrowing litters ranging from eleven to fourteen. Such is the demand for this progeny that the boys will not have enough pigs to meet the orders. The good pigs will be nearly all used in the club work, which is enlarging in scope. Other counties are trying to get pure-bred stock from Worcester. One county wishes to purchase 32 pure-bred sow pigs and another 15. From $12 to $18 each is the selling price of these pigs.

The banks have not regretted their loan and are now financing boys who have their pig business "going" and are enlarging their equipment. These ambitious boys are giving most careful attention to the animals. Accurate accounts of cost of production and breeding of individuals are kept. These are the farmers of tomorrow, trained to know how the money was spent and whether the investment paid. Books are kept and some boys have money in the banks, from which they check as expenses are paid.—Marylander.

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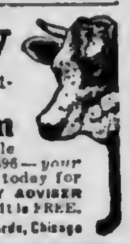
OUR MOTTO—"Like Begets Like."

Lump Jaw



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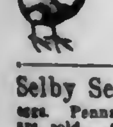

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Conducted by W. C. Fair, V. S.

Advice thru this department is free to our subscribers. Each communication should state history and symptoms of the case in full; also the name and address of writer. Initials only will be published. We cannot make reply by mail. This is one of the most valuable columns of the paper and we invite readers to make use of it. Clippings from this column, when properly preserved and classified, make one of the most valuable medical symposiums a farmer-stockman can obtain.

Ocult Spavin Lameness.—Mare is lame in hind leg. When starting she walks on toe; ankle knuckles forward; she dislikes to put much weight on foot. At first I thought lameness was in ankle, but now I believe it is in stifle joint, but the stifle has never been dislocated, but may have been sprained. No blemish or swelling on leg, so far as I can find. She began going lame last fall. After going a quarter mile all the lameness leaves, but after she stands 10 or 15 minutes she is lame starting. Will driving or light work harm her? C. H. M., Adams Co., Pa.—Your mare suffers from a blind spavin (ocult spavin). A little later you will find a small bony bunch appear on lower fore and inner part of hock joint. Driving on hard road or heavy hauling may have caused it, or some of her relatives may have suffered from bony ailment. The treatment should consist in absolute rest and counter-irritation of hock joint. Doing light work on soft footing will not make her much worse, and if you must work her, paint fore and inside of hock with tincture of iodine daily. If you can give her rest, clip off hair and apply 1 part red iodide mercury and 4 parts fresh lard every 10 to 15 days. You can safely apply any of the commercial spavin remedies which are regularly advertised in this paper.

Chronic Cough.—Holstein steer 2 years old came in from pasture last fall covered with lice. I killed the lice, but ever since he has been coughing more or less and has not thrived. What shall I do for him? E. C. S., Findlay, N. Y.—Give him ½ dram ground nux vomica, ½ ounce ground gentian and 1 ounce powdered licorice at dose in ground grain three times a day.

Chronic Lameness—Fistulous Tumor.—Cow has been troubled with shoulder lameness for last 48 months. A large bunch came on shoulder and after a time I opened it, top and bottom, but it still runs. When fluid is injected into one opening it comes out of the other. E. O. S., Sligo, Pa.—Doubtless your cow bruised her shoulder and abscess formed, but when you opened into bunch you failed to obtain perfect drainage. A little more cutting is necessary; then swab out abscess with tincture of iodine occasionally. Apply 1 part chloride lime and 9 parts boric acid once a day. Push some of this powder to bottom of cavity.

Partial Paralysis—Indigestion.—I have a pig three months old that was taken lame only a few weeks ago. He can stand only a few minutes at a time, then loses control of all four legs at once. He has a good appetite. I have been giving him and his mate one can of condensed milk and a quart of chop, mixed with water, for all three meals, until this lameness came on, then I lessened the feed some. Would like to know the cause and what can be done for him. C. T. O., Wellsboro, Pa.—Give pig an ounce or more of castor oil to purge him, also give ten drops of dilute hydrochloric acid in either feed or water, or as a drench in one pint of cold water, three times a day. Change his feed; feed some oatmeal and tankage. It is perhaps needless for me to call your attentian to the necessity of cleaning and keeping his pen clean. His bowels should be kept open.

Foul in Foot.—We have a cow that is sore between the claws of the fore feet. It is known locally as the fouls. Can you tell me what to do for it? E. F. K., Forest City, Pa.—If you will keep her feet clean and apply coal-tar disinfectant, full strength daily, and cover fore feet with oakum, she will get well. Another very good remedy is equal parts calomel and boric acid.

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The drill that will do the best work for you is in one of these lines. It is handled by some local dealer not far from your farm where you can see it, or you can find out all about it by writing us for drill catalogues. There are drills for planting every kind of grass or grain, with or without fertilizer, in every kind of soil.

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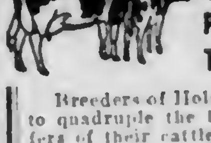

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AGRICULTURE
THE KEYSTONE OF
NATIONAL PROSPERITY

ESTABLISHED 1880

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FACTORS IN WHEAT GROWING

Lessons From Ten Years of Experimentation and Field Observations

PROF. A. E. GRANTHAM

DEL. EXPT. STATION

During the recent war more attention than usual was given to the growing of wheat. The guaranteed price as fixed by the government encouraged large seedings in almost every section of the country. Now that the price of the 1920 crop will be determined by the open market of the world, farmers are wondering how far they should venture in planning for next year's crop. They hesitate because of the uncertainty of price, and because labor and fertilizers are more expensive than during pre-war times.

The price of a bushel of wheat in 1920 is not likely to be far below that of the present. The early estimates of the 1919 wheat crop greatly exceeded the mark. The unusually wet weather during the months of July and August in many of the wheat-growing states will reduce the expected yield very considerably. Then, too, it will take a year or two at least for the wheat producing countries of Europe to regain their normal production. In the meantime those people must be fed, and every prospect seems to indicate a strong demand for bread-making grain for many months to come.

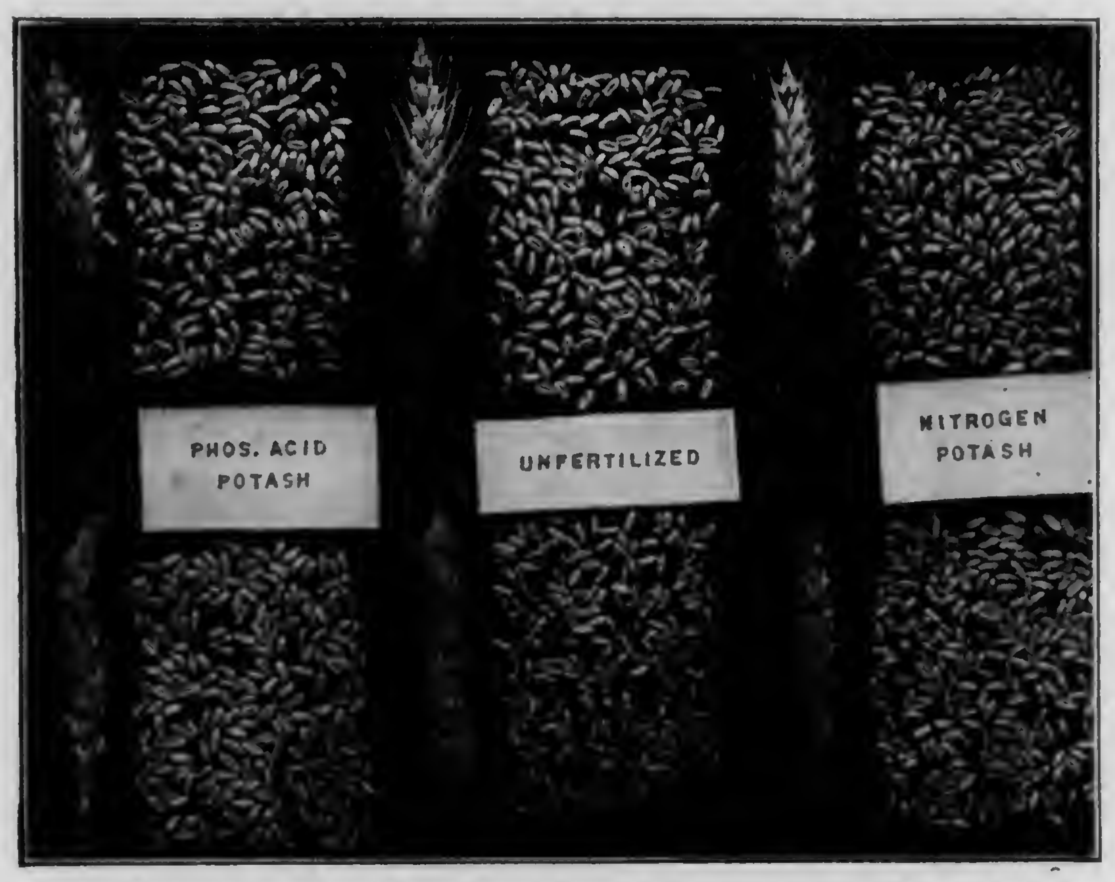
On the other hand, the cost of production, especially labor, is not likely to be reduced very materially. However, it is encouraging to note that the price of complete fertilizers has been reduced about 30 percent for the fall trade.

There will be a tendency no doubt for farmers to reduce their acreage of wheat to within their former systems of rotation. The extensive seedings of wheat have been made, in many instances during the past three years, at the expense of the soil. This has been done by growing wheat two or more years on the same field, thus disregarding the best principles of soil management. As this was done in response to the patriotic call for more food, it was well and just. With the increasing demands and price for dairy products we shall probably see a quick return to the more normal rotations in which greater attention will be paid to corn, hay and pasture crops. Much of the extended acreage of wheat in the past few years has been accompanied by the application of fertilizers containing little or no potash. The interference of the crop rotation in order to sow a larger acreage of wheat has resulted in lowering the fertility of the soil which has not been met by the kind of plant food furnished in the commercial fertilizers that have been obtainable during the war. While the total production of wheat has been greatly increased, the average yield per acre, especially in the Eastern States has not been up to normal.

Wheat growing should occupy a place in the operations of every well-conducted general farm. Careful studies have shown that for the labor expended, only one general farm crop, viz., hay, pays so well. In other words, wheat pays more than corn, potatoes or even tobacco, per hour for the labor of producing it. These conclusions were based on pre-war prices.

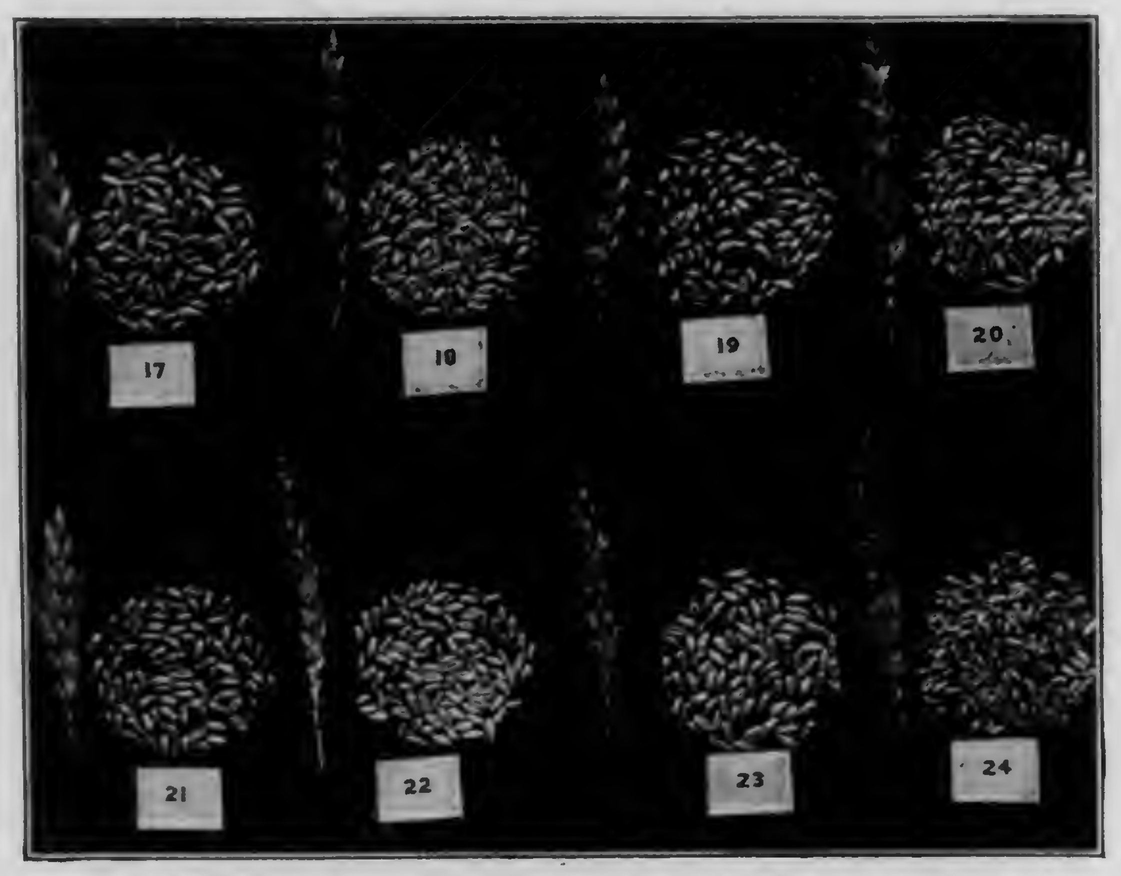
Return to Normal Rotation

The normal profit in wheat growing from year to year depends in a large measure upon uniformly good yields. The overhead charges of production reach a certain sum for every crop, whether large or small, and unless this expense is more than met there is no profit. Every additional bushel above a certain yield represents an increase in profit. The chief items of expense in growing a wheat crop are labor, fertilizers and seed. The cost of labor and seed vary but little from year to year, while the amount and kind of fertilizers may be increased or reduced as the case may be.



Note Differences in Yield of Smooth and Bearded Varieties under Different Systems of Fertilization

The chief factors in securing a profitable yield of wheat are soil preparation, fertilization, time of seeding, and variety. The proper soil preparation is secured not only by the tillage of the land just before the crop is seeded but refers to the kind of rotation of which the wheat crop forms a part. Adequate and economical soil preparation is not possible if some consideration is not given to the system of crop rotation, and especially to the crop that preceeds the wheat. As an illustration, in some sections wheat follows corn. If the corn matures late, or the weather is such as to prevent the prompt harvesting of the crop it is impossible to put the soil in the proper condition to seed wheat on time. In many parts of the Eastern States it may be well to re-plan the rotation so as to have wheat follow some other crop than corn.



Differences in Yield from Smooth and Bearded Heads in Same Field

In Delaware a very satisfactory four-year rotation has been followed where corn occupies the land the first year. Crimson clover is seeded in the corn at the last cultivation and is turned under the spring of the second year for soy beans. Those are removed for hay or seed, and the land seeded to wheat for the third year. The wheat is seeded to timothy and clover for the fourth year. By this rotation plan it is possible to seed the wheat at more nearly the proper time and with less expense for soil preparation (as the soy bean land needs only to be disked) than if the wheat followed the corn. The land the second year need not be planted entirely to soybeans. In many sections, sweet corn or silage corn, or tomatoes may occupy a part of the field with the soy beans. All of these crops can be removed in time for seeding wheat, and the extra fertilization they receive will be of indirect benefit to the wheat crop. Cow peas might be substituted for soy beans where desirable.

In the more northern sections where oats do well, they may follow the corn and in turn be followed by wheat. Oats are harvested early enough to allow the ground to be replowed and thoroly prepared for wheat. If the rotation can be so laid out that plowing is not necessary for wheat, so much labor is saved. The colder the climate the more necessary it becomes to plow the land early enough to have it well settled and compacted before seeding. Where wheat follows oats or wheat, early plowing is desirable so that frequent harrowings may be made before seeding time. This process promotes the formation of nitrates in the soil and gives the wheat a quick start in the fall.

The preparation of the soil must be made in such a way as to have a firm seed bed with a loose mulch two or three inches deep at time of seeding. The seeding should take place early enough to allow the wheat to make a good thrifty growth before winter sets in.

Fertilizers for Wheat

Another factor of prime importance in the growing of wheat is plant food. Each bushel of wheat contains a certain amount of nitrogen, phosphoric acid and potash. To grow a profitable crop the soil must furnish these elements in the proper proportion and amount or must be supplemented by manure or commercial fertilizer. It is quite as necessary that a properly balanced ration be supplied to the wheat crop as it is to have the proper amount. A soil rich in nitrogen and potash but deficient in phosphoric acid cannot develop a normal crop.

That the use of commercial fertilizers increases and tends to stabilize the yield of wheat is shown by the tests conducted by the Delaware Experiment Station during the past ten years. The rotation in which fertilizers were used on wheat is the same as described above namely, 1st year corn; 2nd year soy beans; 3rd year, wheat and 4th year timothy and clover. The table below gives the average yield per acre for each of several treatments.

The Effect of Fertilizers on the Yield of Wheat 10-Year Average

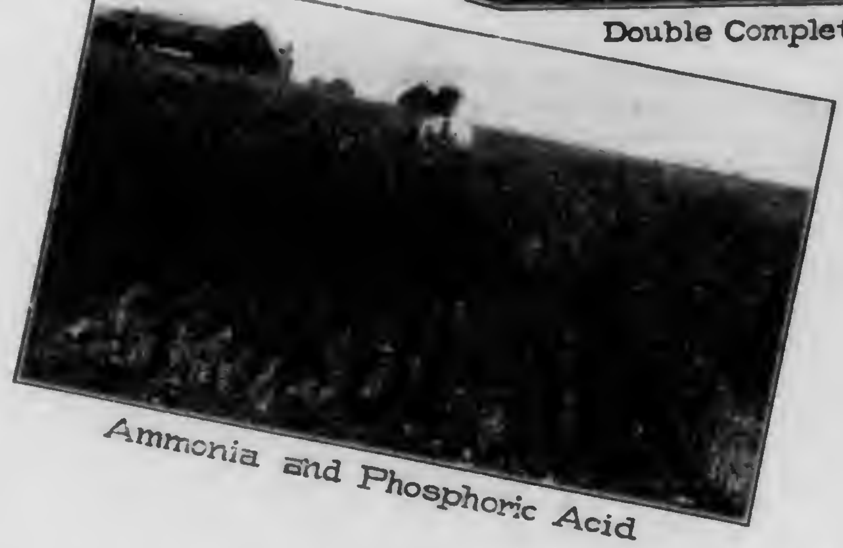
Treatment	Bus. per acre	Gain due treat. bus.	Wt. per bus. lbs.
Nothing	11.5	....	53.0
Phosphoric Acid	19.8	8.3	57.0
Nitrogen and Phosphoric Acid	22.8	11.3	57.5
Phosphoric Acid and Potash	24.8	13.3	58.5
Nitrogen, Phos. Acid and Potash	28.9	17.4	59.0

Acid Phosphate

Phosphoric Acid and Potash

No Fertilizer

Double Complete Fertilizer



Ammonia and Phosphoric Acid

Single Complete Fertilizer

PHOTOS by COURTESY DELAWARE COLLEGE AG'L. EXP. STA.

The average yield of the unfertilized plots was 11.5 bushels per acre. Acid phosphate gave a yield of 19.8 bushels, a gain of 8.3 bushels due to the fertilizer application. Where nitrogen and phosphoric acid were applied in combination, the yield was 22.8 bushels, an increase of 11.3 bushels for the treatment. Phosphoric acid and potash combined gave an average yield of 24.8 bushels, or a gain of 13.3 bushels over the unfertilized plots. The complete fertilizer application gave a yield of 28.9 bushels, making a gain of 17.4 bushels above the untreated plots. This represents an increase in yield of 150 percent, due to fertilization. In the same experiment other plots, on which nitrogen and potash were used singly, gave an increase of 3.1 and 5.9 bushels respectively.

Thus it appears that phosphoric acid has more effect than any other element in increasing the yield. Potash stands next, with nitrogen last. Undoubtedly the nitrogen content of the soil is fairly well kept up by the type of crop rotation. The application of nitrogen increased the yield about 4 bushels per acre. Figuring wheat and fertilizers at pre-war prices, the plot receiving acid phosphate gave a profit of $6.80 over the cost of treatment; the nitrogen and phosphoric acid combined gave a profit of $6.30 per acre; the phosphoric acid and potash together made a profit of $9.30 per acre, and the complete fertilizer treatment yielded a profit of $9.90 per acre. It will be noted that the phosphoric acid and potash combined gave within 60 cents as much profit as the plot receiving complete fertilizer. In other words, the nitrogen under these conditions increased the profit by only 60 cents per acre altho it raised the yield 4 bushels. Even with this low price of wheat none of the treatments yielded less than 125 per cent on the investment in fertilizers.

This is not the whole story of the effect of fertilizers on wheat. As stated in the beginning, the farmer is interested in getting a uniformly high yield year after year, if the business is to prove profitable. If we examine the annual yields of this test it will be found that the unfertilized plots varied in yield during the ten-year period, from 5 to 17.5 bushels, spread of 250 percent. During the same years the plots treated with commercial fertilizer ranged from 18 bushels for the poor year to 43 bushels for the most favorable year, a spread of 138 percent in yield.

The average yield of the fertilized plots for the ten years was 23.9 bushels; for the poorest year 18 bushels, a difference of 60 percent. The average yield of the unfertilized plots was 11.5 bushels; for the poorest year 5 bushels, a difference of 130 percent in yield. The following table gives the results in a comparable form.

The table shows that the fertilized plots outyielded the untreated plots by 17.4 bushels as an average of ten years. During the best season fertilizers increased the yield 25.5 bushels and during the poorest year, 13 bushels. These results show that the yield of wheat was more than doubled by the use of commercial fertilizer, not only on the average, but during the best and the poorest seasons as well. If the fertilizer used cost the equivalent of 5 bushels of wheat, the yield is still increased by 100 percent for the average of the ten years and also during the best and the poorest seasons.

The Yield of Wheat Per Acre on Fertilized and on Unfertilized Land

	Average 10 years	Yield best year	Yield poorest year	Average Wt. per bu. lbs.	Wt. best yr. lbs.	Wt. poorest yr. lbs.
Fertilized...	28.9	43.0	18.0	59	60.5	57
Unfertilized.	11.5	17.5	5.0	53	55.0	44
Difference...	17.4	25.5	13.0	6	5.5	13

Weight of Grain

The quality of the grain as well as the yield is decidedly affected by the use of fertilizers as shown by these experiments. During the poorest year the unfertilized grain weighed only 44 pounds per bushel; the fertilized, 57 pounds. There is a difference of 13 pounds per bushel, sufficient to place the lighter wheat in the lowest grade on the market. With the best season the grain from the unfertilized plot weighed 55 pounds; from the complete fertilizer plot, 60.5 pounds, a difference of 5.5 pounds. The average weight of a bushel of grain on the unfertilized land for the ten years was 53 pounds; on the plots treated with complete fertilizer, 59 pounds per bushel, a difference of 6 pounds. The application of the proper fertilizer not only increased the yield but has a decided effect on the quality of the grain, a difference that represents several cents for each bushel of grain harvested.

Resistance to Disease

The effects of certain diseases to which wheat is heir are greatly lessened when the crop is properly fed. This was shown clearly in the 1919 crop. Those plots which did not receive a properly balanced plant food ration suffered far more from the attacks of rust, scab and blight than did those where a normal application of fertilizers

(Continued on page 19)

SAVAGE

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CROWS are causing a lot of damage to crops throughout the United States and are the greatest pests among birds.

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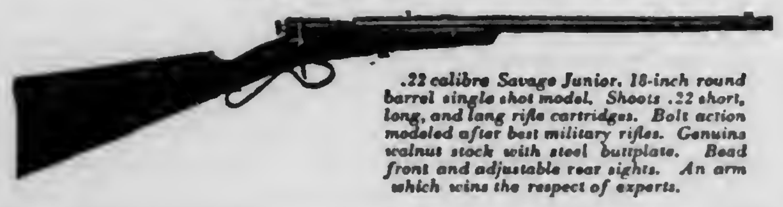

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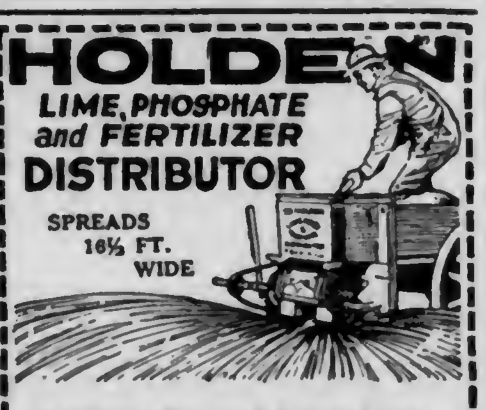

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NEW YORK TRACTOR DEMONSTRATIONS

The largest tractor demanstration ever held in New York state took place August 13 and 14, near Holcomb, Ontario County. Upwards of 10,000 persons attended the demonstration the first day and the second day's attendance was nearly as large. Two thousand automobiles were parked on the farm and along the roadside during the afternoon of the first day. At a valuation of $1,000 each, a conservative estimate, this would make a total investment of $2,000,000 in motor vehicles required to bring the crowd to the big meeting, and they are nearly all owned by the farmers of Ontario and surrounding counties.

Twelve different makes of tractors participated in the demonstration. Among these were several two-plow machines and three or four of tho larger tractors pulling three plows. The field was a large one, with long furrows. The ground was dry and in excellent condition to test out the capabilities of the tractors. The demonstration developed into one of speed, rather than of quality of work, as under the same conditions all did good work. There has been great improvement in tractors made for eastern farming conditions, during the past five years, and still greater improvement is noticeable in the plows and other implements used with the tractors.

The plowing test was supplemented with a fuel test in which all fuel was withdrawn from the tractors and a certain amount put in, which was again measured when the work was completed. A disking test was held after the plowing was completed. The work of each tractor was carefully checked up by inspectors, and the results, which will be published in a bulletin by the State Department of Agriculture, will make valuable information for prospective tractor buyers.

Dr. Jordan confined his address to the high cost of living, the central fact of which, he said, was the high cost of industrial labor which reacts upon farm labor. The farmer is pinched today because of a scarcity of farm labor. The high cost of machinery is another factor in causing high living costs. He believed that profiteering is much exaggerated in the newspapers; that the President and Congress will not be able by legislation to reduce the cost of living to the standard before the war. Thousands of men are doing business on an honorable basis. The farmer must stand for his rights, but must not believe that his neighbors in other lines of production or industry are dishonest. Dr. Jordan regretted that there is not a farmers' organization in the state which represents all the varied interests of all the farmers, and he declared that farm organizations must get together.

The Holcomb tractor demonstration was the second of three similar demonstrations to be held in New York under the division of production of the State Department of Farms and Markets. The first demonstration, which was held in Utica, recently, was attended by 17,000 persons. The third will be held in Northern New York. These meetings are giving the tractor a great boost in New York State. The firm sold 23 tractors the first day of the Holcomb demonstration. Each demonstration is invariably followed with many tractor sales in the territory in which it is held.—E. E. R.

BUILDING AN ICE HOUSE

"We have come to value the Pennsylvania Farmer very highly for its practical and helpful suggestions. I expect to rebuild my ice house this fall and would like some suggestions concerning construction and storing of the ice. I do not need a great amount of ice, but want to put it up in such a manner that I will not have to put up too much for the little I want to use. Some say that good drainage should be provided for the water resulting from the melting ice. Others say that drainage is not necessary, for where water will go air will come, and it is the contact of air with the ice that causes the ice to melt. For these reasons these people recommend a concrete bottom in the ice house. Others say that coal cinders are just as good.

"One man said that the best success he ever had in keeping ice was when he stored it in an old silo. I asked him what feature of the silo made the ice kep so well and he said he did not know unless it was that there was so much room above the ice that the heat from the roof did not get down to the ice covering. I have wondered if the entire construction of the silo was not better for keeping ice than those buildings usually used.—W. F. H., McDonough, N. Y."

Four principles are usually laid down for the construction of a good ice house, but these four may be reduced to one—good insulation. First, there must be good underdrainage to carry off the melted ice, otherwise it forms a conductor of heat to the remainder of the ice stored, and gradually melts it from underneath. Water melts ice faster than air, for the latter merely affects the surface while water penetrates thruout. Second, there must be perfect circulation at the top of the ice in order that the covering of sawdust may be kept as dry as possible so it will not form a conductor for the heat from the air and melt the ice on top. Third, the ice must be packed so as to prevent the circulation of air thru the mass, for there is certain to be some heated air enter the building. These currents of fresh air heat up rapidly whereas dead air does not heat so readily. Fourth, there must be good insulation at the sides and bottom of the mass of ice. These are the four requirements. They may be met in a number of types of buildings.

A PLEA FOR THE SKUNK

Many farmers erroneously suppose that skunks are "varmints" and do much damage to their crops and that they should, therefore, trap and destroy them at every opportunity.

Nothing could be further from the truth. Skunks are among the most helpful and beneficial of the farmer's wild friends. They not only do not destroy any crop whatsoever, but they feed on and consume great numbers of mice, frogs, bugs and insects. They are also fond of wild fruit such as blackberries, raspberries, etc. Sometimes, it is true, they catch a chicken, but then only at night and where the fowls have bad housing facilities.

The U. S. Department of Agriculture estimates the value of one skunk to the farmer at $20 per year. The farmer should for his own interest, if for no other reason, rigidly protect and encourage these black and white friends of his.—L. F. S.

The Production of Seed Potatoes

On August 9th the New York State Potato Association held its summer field meeting on the farm of C. A. Lacy, at Fulton, N. Y. It is most interesting to the writer to look back five years to the time when as first president of the association he held three meetings. Then the term "certified seed potatoes" was unknown. Many growers, like the writer, had been for years using methods of improving potato varieties for use as seed, but there was no system by which a buyer had any proof of the value of such seed excepting the grower's word and his own judgment from its outward appearance. Scientists had been studying the various potato diseases, but their study had, as a rule, but little emphasis on the result of the disease on the tuber for use as sed. The sale of seed potatoes was largely in the hands of seed houses and a demand for new varieties was largely due to the belief on the part of growers that the key to success lay in the discovery of some new and marvelous variety. Often, a grower would buy a dozen new varieties in a season without any means of knowing whether any variety was adapted to his climatic condition and with small chance of its being better than the seed he already had, and often finding the new seed badly diseased.

The great variation in the value of different lots of imported seed, and the losses from poor lots, forced the Long Island growers to consider how they might best secure seed of uniform high quality. A number of these growers at the Farmers' Week meeting of the New York State College of Agriculture in 1914, induced up-state growers to organize with them the State Potato Association, and it is largely to the profitable sale of certified seed potatoes that the success of the association is due.

The association has worked out a system by which growers have fields of potatoes intended for sale as seed inspected by trained scientists at a cost which just covers the necessary expense. This inspection covers the points which the experience of the seed buying growers has shown them to be vital to the production of high grade seed. Only those fields which pass three inspections: at blossoming time, near the close of the growing season, and after digging, are "certified." That the value of this thoro inspection is appreciated by the buyers of seed potatoes is shown by the good prices paid for certified seed.

About 400 people were present at the recent meeting, the greater part being growers coming from a distance. The forenoon was spent in inspecting the fields of the local members of the Granby Association. This was an opportunity for growers to meet the many prominent scientists present and to learn from them how to distinguish potato troubles in the field. Mosaic was the principal disease found, some leaf-roll, and some vines showing a trouble the scientists found hard to diagnose with certainty. There was no late blight and practically no early blight or tipburn. The vines were large and of good color with practically no insect damage, a surprise to many growers from other parts of the state where insect damage has been serious. In the afternoon the program included the following:

Dr. F. C. Stewart, botanist of the Geneva Station, outlined the experiments by which the mosaic disease is being studied in the effort to get disease-free seed. R. C. Parker, manager of the Suffold Co. Farm Bureau, told how that county uses 200,000 bushels of seed potatoes each year, mostly imported from up-state and northern New England. The 1918 tests of the effect of disease in fields in 1917 upon the crop of the succeding year showed following results:

Seed from mosaic-free plants yielded 442 bu. per acre.

Seed from slightly affected plants, 356 bu. per acre.

Seed from badly affected plants, 157 bu. per acre.

Another set of five tests using 15 commercial samples of seed showed variations in yield from 89 bushels per acre up to 301 bushels, with the percentage of mosaic on the vines ranking from only two-tenths of one percent on the vines producing the 301-bushel yield up to 48 percent mosaic on those yielding the 89-bushel per acre.

New System for Testing Seed

For the 1919 tests, 39 up-state members of the association furnished a half bushel of seed each for trial. The idea of this test is to not only inspect the seed grower's crop in his own field, but to also have a sample being tested at the same time under Long Island conditions. Long Island growers are now thoroly awakening to the value of high-grade seed. A disease-free strain of high yielding seed would pay a cost of ten dollars per bushel where a strain no more diseased than many commercial samples would only be worth the price of table stock. The yield is the vital thing.

With the 39 New York state samples, others are being tested from New England and Canada, making 72 in all. Very few of all these were free from disease. It is unfortunate that the bronzing of the leaves where plants are suffering from a shortage of potash in the soil made it hard in one test to tell just what plants were affected.

Dr. M. F. Barrus, of Cornell, brought out how a new discovery in regard to the mosaic and leaf-roll diseases was forcing a complete change in the methods of seed production. It has been known that these diseases were carried from one crop to the next thru the seed, and it has been believed that if the diseased hills in a crop could be removed the remaining hills, when used as seed, would grow a crop free from disease. Unfortunately, recent discoveries have shown that the task of the grower is far harder than this. It has been proved that insects may carry the germs of either mosaic or leaf-roll from a diseased plant to another which may remain healthy to all appearances, and yet produce a crop of tubers which will produce another diseased crop when used as seed. The effect of this new discovery upon seed production methods is far reaching. Where it was formerly thought that a grower might take seed containing considerable mosaic or leaf-roll and by careful work eliminate practically all the diseased plants it is now recognized that it is of the greatest importance for a seed potato producer to begin with a foundation stock which is just as near as possibe free from disease. Another new point is the value of separating the seed plot far enough from other potato fields to lessen the risk of disease being carried by

(Continued on page 10)

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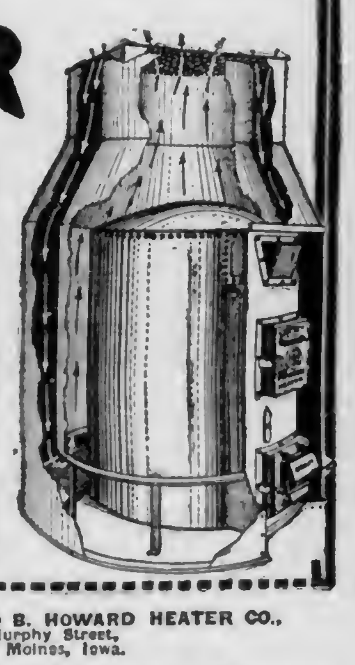

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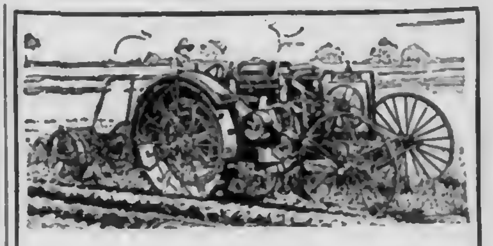

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ESTABLISHED 1880

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PHILADELPHIA, PA., SEPTEMBER 6, 1919
VOLUME 46 NUMBER 10

Our job is to serve our readers. Whenever and wherever we can help you, write us.—The Editors.

Our Serial Story

WITH this issue is published the first installment of our new serial story. Keziah Coffin is a kindly New England widow, whose trite, homely but lovable philosophy is certain to make her many friends among our readers. You will enjoy the typical problems of the young minister coming to a new charge, and you will enjoy more the manner in which Keziah helps him meet them. Do not miss the opening chapters.

Seeding Wheat

THE article in this issue on seeding wheat has valuable suggestions for all wheat growers. Many are asking how large an acreage it is wise to seed this fall. Perhaps the soundest advice is to return to the normal rotation of the farm. It will not pay to grow wheat at the continued expense of the fertility of the land. There are plenty of indications that bread-making materials will be in heavy demand for the next year or years, but regardless of price prospects the wise farmer will return to the wheat acreage that fits into his rotation and provides for the maintenance of the fertility of his farm. Plan to get additional bushels thru better seeding rather than thru increased acreages.

Purebred Potatoes

THE article on seed potato production, found on page five of this issue, should prove interesting to all potato growers. Even tho the conditions in the reader's section are not favorable to extensive, organized efforts in this work the article should impress all with the importance of planting good, pure, disease-free seed potatoes. While all crops are greatly dependent for success upon good seed, none is more affected than the potato crop. The habit of planting year after year the "run of the bin" is responsible for the average 80-bushel-yield instead of two or three times this. Of course, fertilization and culture have a great deal to do with it but even if these factors are fully met, big yields are impossible if the yielding quality is not inherent in the seed planted. In these times of high-priced labor and fertilizer, and the good demand for all products, it is a shortsighted policy to plant seed that is not reasonably sure to produce the maximum crop under the existing conditions.

Jobs For Soldiers

A CHESTER County reader says: "I noticed a plea in a recent issue of your paper for jobs for returning soldiers. I tried to do my part in this way by engaging thru the government agency at different times six different men. Not even one of these men showed up at the time appointed. What further are we suppposed to do? I have come to the conclusion that these men do not want work on the farms."

This is but one of many similar reports. Returning soldiers are not taking jobs on the farm except in rare cases where there is some inducement other than the wage and the character of work. Farmers generally appreciate the condition and in many sections are planning their work to care for it with as little hired help as possible. If the city people could but understand the labor situation on the farms, they would have a keener appreciation of what farm prices, hours of labor, and such apparently little things as the daylight saving law mean to the future farm production of this country. Until there is that better understanding there will be little improvement of the labor situation on the farms and little hope for general improvement of farm production.

Sanity About Cold Storage

WHEN the public mind becomes panicy, as is the condition now concerning the high cost of living, it seems for the time being to lose its native good sense and is unable to view problems in their right proportion. A case in point is that of cold storage. Because there is a considerable amount of food now in storage, and because prices are high, the public mind thoughtlessly condemns the principle of storing food and would do away with the practice. One apparently intelligent man expressed it as follows: "I would like to see the cold storage houses emptied by the government and the doors locked for six months."

As a matter of fact there is little if any more food in storage now than is usually found at this time of year. The effects may be a little more apparent because there has been little surplus over the current demand thru the year and the storing produced almost a scarcity where in normal times a surplus existed. But what of next winter and next spring? The old-time habit of laying in a family supply of food in times of plenty for use in unproductive seasons is no longer practiced. People buy from day to day—almost from meal to meal, and if it were not for the institution of cold storage, famine would exist in every city before Christmas.

Cold storage not only equalizes the supply thruout the year, but it equalizes prices as well. Altho food might be extremely cheap during the summer without storage, it would be excessively high during the rest of the year, and farmers should remember that the benefits accrue to them as well as the consumers. To sum it up, the modern principle of food storage not only makes it possible for city consumers to live, but also makes it possible for farmers to continue farming.

All this does not excuse the unfair use of the storage principle. The use, regulation and control of cold storage is in the people's hands. They must see to it that hoarding for speculative purposes is not practiced, or that food is not allowed to be kept off the market until it spoils or deteriorates, but it is a shortsighted policy that would destroy a necessary institution rather than enforce laws for its proper use. One much-needed thing in cold storage legislation is a federal law that will unify storage regulations and practices. Each state has its own laws at present and these vary so widely that the public is frequently imposed upon. For instance, the time limit for storing food differs in the different states, so that it is possible to keep food in storage past the time limit in that state, yet take it out and ship it to a state having a longer time limit. In fairness to all this should be prevented, and the only feasible way is to pass a federal law establishing a national limit by preventing the interstate shipment of food kept beyond a specified length of time.

As Farmers See It

NUMEROUS statements have been issued assigning the cause of the present high costs of necessities. Under analysis, most of these statements are found to credit high costs to the misdemeanors or mismanagement of all except the party making the statement. It is time for cool thinking and the facing of all of the facts. Following is a statement issued by representatives of several state farm bureaus in conference with government officials recently. We publish this as one of the clearest assertions of the farmers' standpoint:

"The high cost of living is not due to the storage of meats, vegetables, fruits, eggs and poultry in the season when these are produced in surplus against the season of short supply. Popular as is the hue and cry against storage of foodstuffs, it is a palpable fact that modern storage methods are the greatest food savers in the world; at one and the same time saving food in time of plenty and supplying it in time of scarcity, and moreover, maintaining a steadier level of prices thruout all seasons for any given commodity. Indiscriminate restrictions on food storage will serve only to wastefully glut the market in the harvest season of meats, vegetables, fruits, eggs and poultry, at a price disastrous to the producer and create a dearth of these products out of season at a prohibitive price. Food storage for speculative purposes is intolerable.

"The high cost of living is not due to exportation of food and clothing any more than it is due to our heavy exports of manufactured goods, machinery, etc., of which the farmer is a heavy purchaser. An embargo on foodstuffs to bring down the high cost of living will be as demoralizing to American agriculture as the embargo placed on foodstuffs was to French agriculture in the time of Louis XIV.

"The high cost of living is not due to lack of desire on the part of the farmers to produce to the limit of their physical ability. Not within the knowledge, not in the present generation, have all the farmers of the country extended their every energy in a consecrated effort to produce to the last kernel and pound all the grain and meat products needed to feed a hungry world. The operation of the short-hour day in industrial centers and a talk of shorter hours and ever-advancing pay has made it well nigh impossible for anywhere near the normal supply of help to be maintained on farms. The daylight-saving plan has mitigated against maximum production by reducing materially the practical working hours of the day on the farm.

"The farmer has not struck, walked out or otherwise slackened in production. The high cost of living is due to a stagnation in production of manufactured goods and prepared foodstuffs. Every labor strike that shuts down any plant engaged in the preparation of foods or the making of clothing, that shuts down a mine or a mill, adds to the high cost of living. Shortly after a strike of the Union Stock yards and packing plant employes, the wholesale price of fresh meats advanced fifteen to thirty-five percent, directly due to the short kill and consequent small supply of fresh meats.

"The high cost of living is due to price manipulation and extravagant profits of middlemen.

"The high cost of living is due to the failure of practically all folks to practice even ordinary economy in public and private life. This question of lack of economy in public spending was brought within the focus of the American public's attention early in July, when the railway brotherhoods demanded of President Wilson that he bring down the cost of living immediately, threatening a demand in wage increase amounting to a total of $800,000,000 a year, payable necessarily from one of two sources, revenue from increased freight rates or from a deficiency appropriation, either of which would add to the cost of living. A lack of practicing economics in private life may be illustrated without end. Theatres and places of amusement, resorts and watering places are crowded with beautifully gowned women and handsomely tailored men. The price of shoe shines has doubled and trebled, yet one must wait his turn, though he could shine his own shoes at home for less than one cent."

Let us add to this that the high costs cannot be permanently reduced by artificial pressure on any one class of products or at any one point in the circle. Reasonable economy in all things by all classes, reduction of the standard of living to the basis of necessities rather than luxuries, and a willingness on the part of all classes to give full value in labor, money or production are the only factors that will bring living back to normal. If these things are not given willingly, they can enforce economies regardless of choice. The present tendency towards higher levels has about reached its limit.

HARRISBURG LETTER

Winter Work Planned.—Renaming of heads of the divisions of the Department of Agriculture has been followed by vigorous planning of the work the State authorities plan for this coming winter, including the try-out of some ideas which have been under discussion. Preliminary announcements have been made regarding the farmers institutes, the farm advisors and the farm products show, and there will be something to say soon regarding the marketing bureau and its plans for bringing co-operative enterprises to the attention of the farmers. Thruout the summer there has been a careful following up of the various licenses issued by the Department, and fertilizers, seeds and other materials coming under State supervision have been given close attention with some gratifying results. Secretary of Agriculture Fred Rasmussen after a conference at State College was able to announce that the College, the farm bureaus and various bodies interested in agriculture would co-operate to the fullest extent in the enterprises of the winter. As far as the funds will reach, the department will push its plans for placing its expert advice within reach of the farmer and will work in co-operation with farm bureaus.

The Mid-Winter Show.—The plans for the fourth mid-winter farm products show call for an enlargement of the display and the meetings. It is possible that "Farmers' Week," which is held at State College in January, may be transferred to Harrisburg so that these meetings will be held at the same time as the sessions of the various agricultural bodies and the assembled farmers get the advantage of the best speakers and the latest ideas. There will be no State Board of Agriculture next winter, but instead there will be daily joint meetings with top-line talkers with specialized sessions during the day. The greatest attention will be given to marketing and co-operative buying, dairy products and equipment, and farm machinery, while some arrangements for buying pure-bred cattle are talked of. If the plans are worked out there will be a "Farmers' Week" for Pennsylvania such as no other State ever had and which will probably set the pace for many county meetings and for organization of farmers for buying and selling.

The Institutes. — The arrangements for the farmers' institutes, as already discussed in this letter, call for a reduction of the number of sessions and of speakers and an increase of the discussion of the practical problems of the day. According to what Secretary Rasmussen says, the State wants to find out what is wanted by farmers and fruit growers and stock raisers and to afford means to meet the needs as far as possible. An innovation will be singing as the conference at State College held by the institute chairmen showed the value of such livening up. There will be numerous one-day sessions, at least two state experts at each session, places for home talent and opportunitiy for discussion of troubles in farming with less attention to government. In fact, as far as possible the sessions will be devoted to farming talk and politics will be cut out. The dates and places for the institutes will be made up shortly and they will begin later than usual.

Going to the Fairs.—State experts have been directed to continue their work among the farmers by attending fairs and speaking where advisable or where there is a demand for special information in regard to pests or production or soil. The campaign to insure the employment of better seed grain and the use of such crops as are suited to the soil instead of a rigid adherence to the rule of the grandfathers will be started at these county fairs and similar meetings. At some of the fairs State agents will be present to answer questions from farmers.

Live Stock Board.—The State Live Stock Sanitary Board which has successfully fought one of the most extensive outbreaks of hog cholera known in the State for many years is preparing to prevent any recurrence of the diseases which have appeared from time to time during the autumn, and a good strong organization is being built up among farmers who realize what the purchase of stock that has not been carefully examined is going to mean. There are intimations of a change in personnel of the executive office of the board, which may materialize before very long. It is said that it will be entirely amicable and that no politics is mixed in it.

Farmers Make Reports.—Farmers in Pennsylvania to the number of 3,500 have filed reports on their acreage with the State Department of Agriculture in response to a call for co-operation with the federal authorities. Some time ago an appeal was made to the State authorities to secure data on acreage direct from farmers so that trustworthy reports could be instituted. The State officials got into touch with more than 1,600 assessors and over 1,100 of them have reported that they placed the reports in hands of farmers. It is expected to get thousands of additional reports all of which will be listed at Washington and used in a national compilation.

The Telephone Inquiry.—Much that will be important to the future of the telephone rates in Pennsylvania is expected to turn up in the inquiry which the State authorities have started as a result of the request of the Bell Telephone system to continue war rates. The Commission ordered the Bell to make cuts something over two years ago and the chances are that there will be a lively hearing held here this month The city of Pittsburgh has already protested the rates.

Road Signs Ordered Down.—The State authorities took drastic steps to get rid of the signs which have blossomed along State highways since the campaign for county nominations began throughout the State. Every sign within the legal limits of a state highway has been ordered removed. There is no objection to signs on private property along the roads.

Thin Out Blackbirds.—From all accounts the blackbird kill this year will be the largest in a long time, the opportunity for shooting the birds in August having been embraced by many people. In some counties hundreds of city hunters went out to clear up the birds and in other sections farmers organized blackbird and crow hunts with considerable success.

State Revenue Heavy. — Indications are that the State revenue will run away up this fall and winter. Already the inheritance taxes have been paid in sums greater than expected and the settlement of corporation taxes have been at a rate which would have been deemed imperial a few years ago. There is little doubt but that the State will be able to meet the big appropriations made by the 1919 legislation.

The Salary Question.—The teachers' salary question is going to wind up in the courts. This is the opinion of many men who have studied the act and many who have puzzled over its provisions. Predictions are freely made here that teachers will not get the salary advances expected and that they will go after school boards which will get the State involved by sending questions to the Capitol. It should not be overlooked that if a school board reduces the term the State can withhold the appropriation. One or two districts have brought this possibility up and asked what the commonwealth will do. There are something like thirty questions raised over the salary law and the Department of Public Instruction will likely seek the official aid of the Attorney General.—Hamilton. Harrisburg, August 30.

NEW YORK LETTER

September Milk Price. — The Dairymen's League has set the September price of milk at $3.24 per 100 pounds for 3 percent milk in the 200 to 210-mile zone from New York City. This is 8 cents more than the August price. In the vicinity of Buffalo $3.08 per 100 pounds for 3 percent, or a flat rate of $3.32 per 100, and near Rochester a flat rate only is made, the price being $3.49 per 100 pounds. It is of interest to note that the Governor's new commission, Dr. John Finley and ex-Governor Glynn, report flagrant profiteering in retail milk in practically all cities of the state, but that farmers are not receiving an exhorbitant or even a fair price for milk. They urge prompt action against milk dealers by district attorneys and by the U. S. Attorney General; also the appointment of a fair price milk commission in every city, of nine members—three to be appointed by the Governor, three by the Mayor, and the health and markets commissioners of each city and the state health commissioners or a commission similarly composed.

Tariff and State Crops.—The importation of Chinese beans and of Chinese eggs into the port of Seattle, thence across the continent by train, to be sold by carloads on New York markets at prices that state farmers cannot match and remain in the business calls for prompt tariff revision, if our farming industry is not to suffer. Poultrymen are and have been having troubles enough without this competition, if the public wants to get a fair supply of fresh eggs of known quality. The duty on beans is now but 25 cents a bushed, fixed before wartime conditions, when beans were $2.25 in Boston. The duty should now be 90 cents to $1. Last year 4,000,000 bushels of beans were imported. Because they demoralized our market, New York farmers are giving up beans very rapidly.

Sun Time Wins.—Our farmers are relieved at the recent act of Congress in overcoming the President's second veto. They hope a precedent has been established, and that in future their own organizations, thru lessons learned in combating this harmful measure of changed clocks, will be more efficient in protecting farm interests. They will do well now to give their attention everywhere to combating the Lane policy.

Sale of State Farms.—Western buyers are coming into the state to secure farms more and more. A Cortland real estate man has averaged a score of sales to such buyers each month since early Spring, and this week he expects eighteen men in one group who want farms. Such buyers almost always want the farm with stock and tools.

Labor Federation Meets.—Four hundred delegates and representatives of federal, state and city governments met at the New York State Federation of Labor's 56th annual convention in Syracuse this week. Five hundred women delegates also met in the Women's Congress in that city. The Governor, Samuel Gompers, president of the American Federation, and J. P. Holland, president of the State Federation, were among the speakers.

Onion Harvest.—This year's onion crop raised from seed is being harvested two weeks earlier than usual. Thrips are affecting the crops unfavorably. There will be many bushels of small onions this year. Buying has not really begun as yet, and prices are yet uncertain.

New York Hay in Demand.—A western New York co-operative farmers' organization has formed a good demand for hay in North and South Carolina, Georgia and Washington, D. C. The hay was handled thru a broker for a fee of 50 cents a ton. The price basis is f. o. b. shipping station, draft on arrival, with inspection allowed, the National Hay Association grades and rules prevailing. Prices have ranged from $27.50 to $35 a ton. The state College of Agriculture suggests a State federation to be composed of county federations, with a salaried business manager, as a method of securing better distribution of hay at less cost.

Six-Hour Farm Day.—It is worthy of attention and may have nation-wide results that gruit growers and farmers of Sodus, Wayne County, are enrolling in an organization that pledges its members not to engage in farm work for more than six hours a day hereafter, with a Saturday half holiday. Coal miners and now shoe factory workers have joined those who are asking for and getting a five-day week, big increases in wages and a six-hour day. Why not the farmer, who is the biggest consumer of all? He must have help and cannot get it on a 12 to 15-hour day as of old, or even a 10-hour day.

Small Notes of Interest.—Cornell University is to have a new $1,500,000 chemical laboratory. Ithaca is looking for a location for a curb market, as prices here are extremely high. A Tomphins County farmer's wheat averaged 37 bushels to the acre. Cayuga County supervisors have appropriated an extra $500 towards Farm Bureau support. Madison county has hired a visiting nurse who has thus far discovered 189 cases of tuberculosis. Soldiers at Fort Oswego bought ten pigs with money from their mess fund. They now have a herd of 148 headed by one of the finest bred sires in the state. One thousand insane soldiers are to be admitted to the asylums of the state as soon as demobilization is completed. A boatload of weapons has been seized by the Buffalo police and dumped into Lake Erie. Rural teachers' wages are running from $18 to $25 per week in Central New York, and there is a scarcity of teachers. The new sanitary toilets insisted on by the state department of health are causing much dissatisfaction in the poorer districts, as improved approaches and care of present facilities would have given as good satisfaction. Everywhere there is discontent with the present school system. Junior high school courses and agricultural schools should be within reach of every child, without boarding away from home for younger children.

NEW JERSEY NEWS

Foods Advance Despite Probe.—The investigation into high prices of food in New Jersey by the Federal and State authorities has had little effect upon the cost of necessities so far. Cheese, however, has dropped to 35 and 37 cents per pound and lard to 36 and 37 cents, but while potatoes show a small decrease in price they are higher now than they were during this period in 1918. Butter has advanced one cent., despite the fact that this commodity always takes a drop in the summertime, the price prevailing now being from 61 to 65 cents per pound, while there has been a slight decrease in the price of cabbage but none in the cost of eggs. Sales of army beans in some parts of New Jersey have had some effect on stocks of beans kept at retail stores.

Crops Show Slight Recovery.—Crops in New Jersey have shown some recovery, but they mostly show permanent injury from excessive rains. Peaches are maturing early with a slightly inferior flavor and are rotting considerably. Apples altho not abundant are a very good crop. Tomatoes, lima beans and peppers are in some sections of the State virtually a failure, while potatoes in low ground, some of which is still flooded, are lost. Late red-skin potatoes are growing well, sweet potatoes are excellent and promise a large crop, and corn, grass and pastures are good to excellent.

The Good Cranberry Crop.—The outlook for a good crop of cranberries from the New Jersey bogs is not good this season, but the cranberry interests centred in the vicinity of Jamesburg, Farmingdale and Tom's River, however, may spend $150,000 on publicity in magazine advertising in an effort to educate the public to the value of the cranberry as food. The crop of these berries in the State this year has been estimated to be about 150,000 barrels, and of this amount the Jamesburg section will produce about 500 barrels if weather conditions continue favorable. It was stated during the week that the recent heavy rains in Jersey have raised havoc with the cranberry crops, in many instances damaging 50 percent of the berries. It is feared that a shortage in sugar will have a tendency to decrease the demand for cranberries in this and other States for canning purposes.

Mercer Dairymen Meet.—One of the principal features of a field day held by the dairy committee of the Mercer County Board of Agriculture during the week on the H. C. Scudder farm at Trenton Junction was a discussion of the work of this organization by Robert W. Balderston, secretary of the Inter-State Milk Producers' Association. About 85 percent of the dairymen in Mercer County are members of the association, and they were present in large numbers to hear the discussion. They also inspected the Scudder herd of pure-bred Holsteins, which is held to be one of the best producing herds in the State. There are a number of cows in the herd producing more than 200,000 pounds of milk in one year.

DOUBLE FABRIC OVER BODY

Keeps Cold Out—Keeps Heat In.

DOUBLE-BODY UNDERWEAR

GIVES PROTECTION WHERE PROTECTION IS NEEDED

DOUBLE-BODY UNDERWEAR combines maximum protection and comfort with minimum bulk and weight. DOUBLE-BODY UNDERWEAR is constructed with a double thickness of fabric over the chest, abdomen and back. The arms and legs are covered with but a single thickness of fabric. This is the ideal undergarment for those who do not want to hamper their movements by wearing heavy and bulky outer clothing.

Every man, woman or child whose work or play takes them outdoors in cold weather needs the protection DOUBLE-BODY UNDERWEAR affords. It defends the vital parts of the body from cold and helps to prevent Winter sickness. DOUBLE-BODY UNDERWEAR is made in cotton and wool fabrics for men, women and children.

SINGLE FABRIC IN SLEEVES AND LEGS

Learn more about this superior Winter underwear. Write today for catalog No. 8418P, telling all about the DOUBLE-BODY principle of underwear construction and illustrating the different styles and fabrics in which it is made. Made for and sold exclusively by

Sears, Roebuck and Co.
Chicago

Save 2 to 3 Months Feed With Cal-Sino

By getting all the body building and pork making parts out of your feed, Cal-Sino builds up and fattens pigs to porkers in 2 to 3 months less time than without it.

The saving of feed for the extra 2 to 3 months and the extra pork Cal-Sino gets from your feed many times over pays for its small cost.

Cal-Sino is an all medicine—no filler powder. It costs less for results because dosage is less.

Prove this, give Cal-Sino a good test on our guarantee of satisfaction or money back.

Fred. W. Vessels, Greenbush, Va., wrote March 3, 1918 "I raised four pigs from 13 lbs. to 420 lbs. average from April to December (8 months) with the help of Cal-Sino. It is the best I ever used for hogs."

If your dealer can't supply you, write direct to The Cal-Sino Co. Inc., Dept. H-2, Baltimore, Md., for particulars and name of nearest dealer.

Cal-Sino HOG RESTORATIVE

GUARANTEED

NO MONEY DOWN —YEAR TO PAY

Sold on Farm Credit Plan

Nothing To Pay Until 60 Days After Arrival

GREATEST

Yes, greatest in efficiency, greatest in economy, strength, simplicity.

Famous Majestic Engines

We send you any size without a cent of advance payment. No deposit; no C. O. D.; no references. If you keep it, make first payment 60 days after arrival; balance in equal 60-day payments. Otherwise return it and we will pay freight both ways.

Compare Point for Point with others costing a great deal more. Jacket-hopper water cooled. Perfect lubrication. Perfectly balanced fly wheel. **Order Before Price Advances.** Increasing costs will soon force an advance in price. Get yours now at present lowest bed-rock price—and take a whole year to pay. **Free Book 26** Gives you all the facts. Also 501 reasons why you should have a Majestic—testimonials from users in every state. Wonderful bargains in cream separators and all kinds of farm equipment. Write for it.

The Hartman Co. 4078 LaSalle Street Dept. 1960 Chicago

Ventilate Your Barn With PULLMAN VENTILATORS

Keeps your barn free of foul air, makes a healthier condition for cattle and horses and a safe place for crops. A scientific exhaust ventilator easily applied on any roof. Hundreds in use. Write for prices and further information. Agents Wanted.

PULLMAN VENTILATOR & MFG. CO.
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Are Going Fast But Going Promptly

Have You Ordered Yet?

THE CREAMERY PACKAGE MFG. CO.
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Government and Municipal Bonds
Over a Quarter Century in this Business
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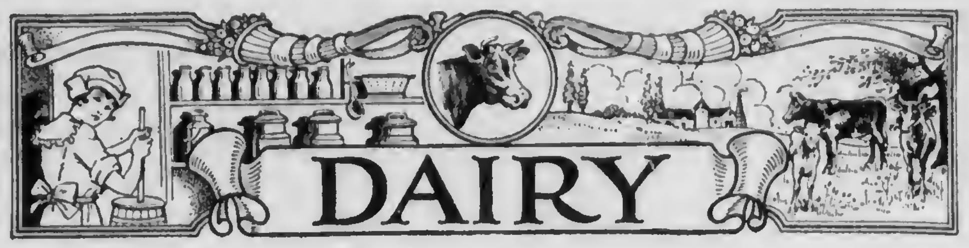
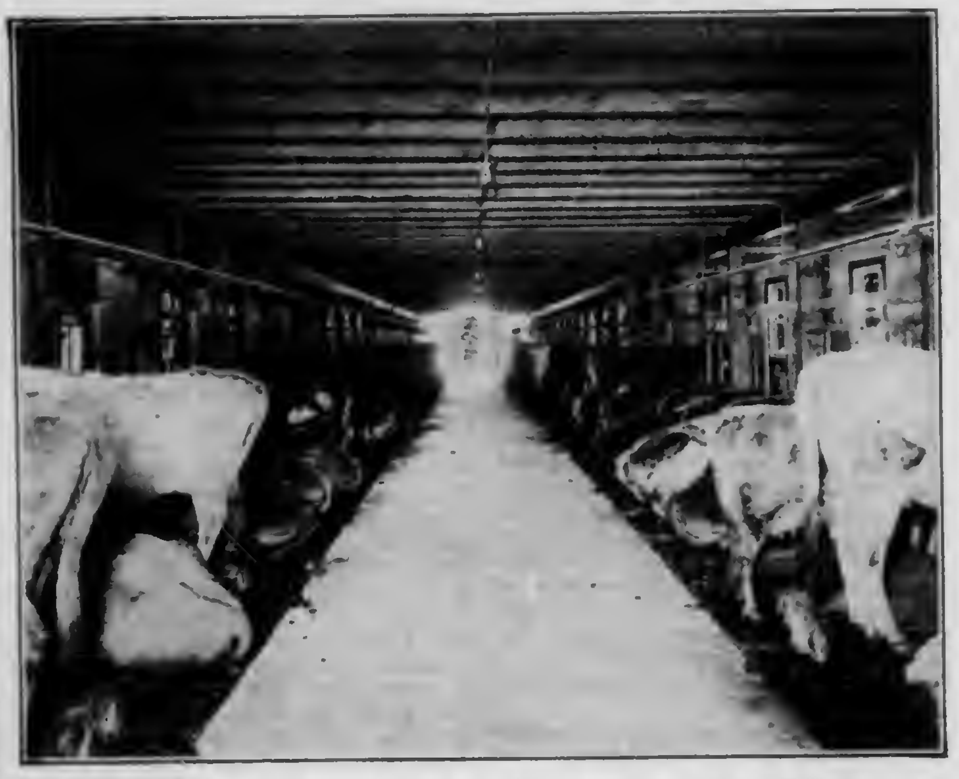


DAIRY

MANURE PIT SAVES MONEY

A manure pit doesn't cost money; it saves money. The value of the manure saved when stored in pits will equal at least 5 percent on the pit investment. When manure is stored in loose, flat piles in the barnyard, the loss by leaching and decay in six months amounts to from 30 to 60 percent.

Water tight pits are the best means of preserving manure, says the New York College of Agriculture. Such pits will usually be constructed of concrete. They should hold the liquid, and keep the solid material nearly, if not quite, saturated. It is not necessary that such a pit have a roof. A roof is necessary only where there is no pit to hold the leachings. Saturation prevents heating, which is a potent source of loss. The normal rainfall on the manure will offset evaporation and insure better saturation.



The Home Electric Light Unit Supplies Lights to all the Buildings.

Amount of Storage Required

Milch cows and horses will together produce a little less than a ton of manure a month to a thousand pounds of live weight. Twenty cows and horses would produce fifteen to twenty tons a month, or about 100 tons in six months from November to April, inclusive. It will weigh from 50 to 70 pounds a cubic foot, depending upon the packing and the degree of saturation. At 60 pounds a cubic foot, there would be required about 3,300 cubic feet of storage space. This would be provided by a pit 6 feet deep by 15 feet wide by 40 feet long. The material could be piled on a pit 30 feet long, other dimensions the same.

Cost of Pit

With 10-inch walls and a 3-inch bottom, there would be required about 700 cubic feet of concrete, which at 65 cents a cubic foot would cost $455. The excavation, reinforcements, and other costs might run the total to $500 to $600, or between $25 and $30 an animal—$4.50 a ton storage capacity. With a 25 per cent net saving, 30 tons of manure would be conserved. At a dollar a ton in the pit, its value would be $30 or interest at 5 percent on the maximum investment. For many crops the value would be $2 to $3 a ton, or 10 to 15 percent on the investment.

ADJUSTING THE SILAGE CUTTER

The most important adjustment of the silage cutter is that of the knives and cutter bar. The cutter bar should invariably be adjusted up to the lower roller, so as to prevent the latter from winding. The knives should be adjusted up to the cutter bar, so they barely touch. The cutter bar and knives should both be kept sharp. As long as they are properly adjusted and sharp and the proper amount of tension put on the rollers, good cutting should result. Do not make the mistake of expecting the knives to run too long without being sharpened. No set of knives will hold its edge longer than one day and they should be changed and resharpened at least that often. If the corn is sandy or hard, they will require sharpening even oftener than this. A good practice is to use two sets of knives and equip the cutter with a knife grinding attachment so that one set can be sharpened while the other is in use. The saving in power alone will more than pay for the extra set of knives in one season's run.

Be careful after having done any work about the machine to see that all of the tools are cleared away. Frequently a wrench or other tool is left on the feed table. Anything of this kind is likely to cause damage to the cutter. Go over the machine frequently and see that all bolts and nuts are tight, particularly those on the cutter bar casting and knives. Keep the machine well oiled and when thru with it for the season, clean it thoroly, grease it and put it away in a dry place.

Carefulness in following out the instructions of the manufacturer and in using good judgment in taking care of a machine of this kind will more than double the life of the cutter.

Dust is one of the tractor motor's worst enemies.

WHEN THE LEAGUE FAILS

The other day I met a young farmer from a Southern New York hill community where dairying is the leading farm activity. Our conversation led to the improvement in dairy conditions since the Dairymen's League became the controlling factor in milk price fixing.

But he was not enthusiastic on this subject. The League in his locality was weak. In fact, in his own words its was "on its last legs." It was so near dead that the company owning the local cooling station was able to make its own prices regardless of the League. The farmers were not only receiving less than the price agreed upon by the League, but were docked on this and that account, until the profits represented by the monthly pay checks were small and unsatisfactory.

The cause of this condition was not far to seek. Two or three of the biggest dairymen located near the cooling station, while being leaders in the League, were dealers in farm supplies. They were enthusiastic promoters of the League just as long as it did not in any way interfere with their business.

When the milk strike was called last winter the enthusiasm of these village dairymen suddenly cooled. The tenant on a farm belonging to one of them was discovered in the act of hauling milk across lots to the cooling station, altho all had agreed to discontinue delivery of milk to the condensary company, and the local cheese factory, for some time abandoned, had been put into operation so that no milk would be wasted. This and similar unfair acts on the part of the local dealers shook the confidence of the members in them, and the League in the neighborhood was wrecked and its influence lost.

The results, as described by my young friend, are only indications of the fate that would befall farmers in every dairy district in the League territory if the Dairymen's League should fail. They show that the dairymen's only defense is organized co-operation, such as is afforded them by the League. If local leaders are untrustworthy, turn them down and elect men to lead who can be trusted. There are no doubt many men operating dairies as a side line, who are deeply interested in the success of the League, but the real dairymen whose principal business is producing milk ought to be among the foremost leaders and have a controlling influence in their League affairs. The selfish schemer must not be allowed to stand in the way of farm co-operation.—E. E. R.

LITTLE SKIM MILK THROWN AWAY

Apparently very little skim milk was thrown away by milk dealers last year. The U. S. Department of Agriculture recently sent questionnaires to dealers in Boston, Philadelphia, Detroit, and Pittsburgh, cities selected as typical. Only one dealer reported throwing away any considerable quantity of skim milk. Others report manufacturing their surplus into various products, including cheese, milk powder, condensed milk, buttermilk, and casein. In Boston, Philadelphia, and Pittsburgh, the largest surpluses came in May and June. The season of large surplus came earlier in Detroit, beginning in February and running thru April. With some dealers the surplus is large thruout the year.

Double the Life

of your farm buildings by keeping them painted. Lumber and carpenters cost infinitely more than good paint. Paint not only lengthens the lifetime but adds 100 per cent. to the appearance.

TRADE MARK **NICE** REG. U.S.A. **Paint**

does both and costs no more than others. If good paint is used, painting need not be done often. NICE PAINT is good paint and wood protected by it lasts many years. Fall is a good time to apply it. Your dealer can supply you---if not, write us direct.

A HELPFULL BOOKLET--FREE

called "Paint Pointers," chuck full of practical, honest information that will help on any painting job you have in mind. Write for a copy.

Eugene E. Nice, Phila., Pa.

"NICE" PAINT READY FOR USE
EUGENE E. NICE
PAINTS, VARNISHES, COLORS, FILLERS.

For the interior of your home and its furnishing. A beautiful durable gloss finish in colors.

NICE STAIN-NAMEL ALL COLORS

Made with a high grade durable varnish. Use for floors, furniture and interior wood work.

PAINT YOUR BARN WITH U.S. GOVT. BATTLESHIP GRAY

AT FACTORY PRICES

Protect your barns from spring rains and hot summer sun with Arlington Battleship Gray—the paint the Government uses on its fighting ships and warehouses. This paint covers well and is easily applied.

You can buy this tested quality-grade paint and our special red barn paint at factory prices now. Freight prepaid. There is an Arlington paint for every use—silos, interior and exterior house paints, implement enamels and MORE-LYTE, the interior sanitary white enamel for dairies. Arlington has stood for quality paint for 17 years. All paint sold on money-back guarantee. Try some and return what's left if not exactly as represented. Reference any Canton bank. Write at once for color card, prices and directions for ordering. Get a quality, guaranteed paint at factory prices.

THE ARLINGTON MFG. CO.
1303 Harrison Ave. CANTON, OHIO
Capacity One Million Gallons Per Year

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QUALITY PAINTS FOR 17 YEARS

WANTED—

Single men to work in up-to-date cow barn. Must be good dry hand milkers. Wages $60 per month and board. Good opportunity for advancement. Can also use one or two experienced men at milking and feeding test cows, wages for this work depending on experience and ability.

WINTERTHUR FARMS
WINTHERTHUR, DEL.
350 head of registered Holsteins.

HAY

W. D. POWER & CO. 601 W. 33 St., New York, are the largest handlers of commission hay in greater New York; if you have hay to dispose of communicate with them.

HAY

THE 70 lb. bag is just the right size for farm use. It is easy for the dealer to stack them up and again it's easy for the buyer to place them in a truck or wagon, automobile or buggy and keep in a good dry place in the house.

It is convenient to open at the top and a simple matter to take out the salt. Being packed in a good bag, it is less expensive and much easier to handle than a barrel.

For these reasons we pack

COLONIAL
SPECIAL FARMER'S
SALT
in 70 lb. bags.

COLONIAL SPECIAL FARMERS SALT
Manufactured By THE COLONIAL SALT CO. AKRON, OHIO
NET WEIGHT 70 LBS.

THE COLONIAL SALT COMPANY
AKRON, OHIO
Chicago, Ill. Buffalo, N. Y. Boston, Mass. Atlanta, Ga.

Farm Products Prices and Prospects

SPECIAL POTATO REPORT

Comments on Late Commercial Crop

The Bureau of Crop Estimates issues the following report on the late or winter commercial potato crop of the United States, based on conditions August 1. This report deals primarily with that part which is shipped in carloads or the strictly commercial crop.

Information this month bears out earlier estimates of a general decrease in acreage from that of last year of from five to ten per cent. Conditions, particularly in the Rocky Mountain States, are not promising. The stand is poor and the acreage is considerably less than last year. In the east the conditions in Maine are very good and the crop is reported in excellent condition in Aroostook County. In New York the condition is rather poor with the exception of Long Island where conditions are most promising. In the heavy producing centers in Michigan, Wisconsin and Minnesota the crop is indicated at considerably less than last year. Michigan is ten points lower in condition than at his time last year, while Wisconsin is twenty points lower. On the other hand the condition of the crop in Minnesota is considerably better.

New York has an acreage of about 6 percent less than last year and 6 percent less than the average, and a condition of about 84 percent for the state. Outside of the Long Island District, however, the commercial crop is in but fair condition. The average for the state exclusive of Long Island is 78 percent. There is a general complaint of this stand and very spindling growth as the result of hot weather. Potato beetles are reported very abundant and there has been some damage from flee beetles; also dry weather in some scattered sections. The crop averages from one to three weeks late, so that loss from frost is likely to be greater than usual.

New Jersey. — The commercial potato acreage in New Jersey is somewhat less than last year and the condition is estimated at about 72 per cent. Stand is uneven and seed germinated rather poorly.

Pennsylvania. — The commercial potato acreage in Pennsylvania is less than last year in most sections of the state. The condition of the crop is now estimated at 79 percent as compared with 68 per cent last year at this time.

FARM LOAN BANKS

Business for July

During the month of July, 1919 an aggregate of $10,359,390 was loaned to 3,384 farmers of the United States by the Federal Land Banks on long time first mortgages according to the monthly statements made to the Farm Loan Board. The Federal Land Bank of Houston leads in the amount of loans closed the same being $1,310,415, with the Federal Land Bank of Omaha running next in amount $1,217,000. The other banks closed loans in July as follows: St. Paul, $1,167,600; Spokane, $1,030,820; St. Louis, $1,006,030; Wichita, $766,200; New Orleans, $762,425; Louisville, $745,000; Columbia, $702,800; Berkeley, $627,300; Baltimore, $528,200; Springfield, $495,600.

On July 31, 1919, the total amount of mortgage loans closed since the establishment of the Federal Land Banks was $244,653,871 to 94,815 borrowers in number. During July 4,532 applications were received asking for $15,440,853. During the same period 4,077 loans were approved, amounting to $12,132,386. Altogether 206,483 farmers have applied for loans under this system, in the aggregate amount of $562,043,439.

RETAIL FERTILIZER PRICES

The U. S. Department of Agriculture has published a report on the retail prices of unmixed fertilizer which obtained in June. It is a striking disclosure of the wide variation of prices charged for fertilizer ingredients. The prices given are the price paid by the farmer in cash in the local markets. The reports were made by the county agents.

The reports show that potash salts were not generally available. Out of 761 reports only 7 gave quotations for sulphate of potash, the prices ranging from $65 to $350 per ton. On muriate of potash 11 county agents gave prices ranging from $47 to $600 per ton. And the so-called Nebraska potash ranged all the way from $35 to $160. The prices of sulphate of ammonium varied from $38 in one place in Pennsylvania to $160 in Florida. On cottonseed meal, high grade, the prices ranged from $35 to $80; tankage, $25 to $150.

The greatest number of reports covered the acid phosphate prices in several counties in nearly all the states east of the Mississippi. The prices of 16 percent acid phosphate ranged as follows: In Massachusetts, $27 to $36; Rhode Island, $28 to $41; Delaware, $22.31 to $36.50; New York, $25.25 to $37; New Jersey, $22.20 to $29.50; Pennsylvania, $25.75 to $32; Maryland, 21.85 to $30.

CROP REPORT

Summary of Crop Conditions as Reported by American Steel and Wire Company's Reporters:

Corn.—All over the corn belt this crop still promises well. There are some sections that have been damaged to the extent of 35 percent by the hot, dry weather coming just at a critical time. Speaking generally, however, the crop is in good shape and has been much improved by local rains during the past week.

Oats.—The reports this week indicate that the yield of oats in general is only fair and much of the grain is light.

Wheat.—Heavy reductions have been made in the estimated figures by the actual threshing of the crop. The greatest proportion of the wheat is now threshed, and it is now apparent that various minor diseases, coupled with unfavorable climatic conditions at critical periods, have produced this result. The greatest inroads in this respect have been made on the Spring wheat crop. Not only has the yield been cut down, as regards number of bushels, but the quality leaves much to be desired.

Cowpeas and Velvet Beans.—Are short, owing to the scarcity and poor germination of seed. Great attention should be paid by farmers of the South to guard carefully the seed of these valuable legumes, as care in this direction will prevent a recurrence of this year's short acreage.

Beans.—This crop promises fair to good in all bean producing sections. Reports from the far West indicate that most of the beans produced last year in that section are still in the growers' hands, and are starting to move at high prices.

Potatoes.—The potato situation has not improved.

Peaches.—Unless there is a change in transportation conditions, owing to strikes, much of Missouri's wonderful Elberta peach crop will be lost, for want of shipping facilities.

Grapes.—Are generally good.

Tomatoes.—Will be a light crop.

Sweet Potatoes.—With prospects good to extra good on this crop, this delicious vegetable should, to quite a large extent, fill in the gap created by the short crop of Irish potatoes.

Weather conditions in Montana have improved, as general rains fell over quite a large area.

PRICES OF ACID PHOSPHATE

Holding that a shortage of acid phosphate does not justify the prices that are being charged by manufacturers for this fertilizer, the United States Department of Agriculture has notified phosphate miners and acid phosphate manufacturers not to advance the present prices of rock phosphate or bulk acid phosphate without submitting the proposed increases together with specific data on real and unavoidable higher costs of production since June, 1919. The Department considers higher production costs the only possible justification for the increases in price since June.

Strikes in Florida and car shortages in Florida and Tennessee have combined to reduce production and shipment. To meet the shipping situation the Department has urged the Railroad Administration to make available sufficient cars for fertilizer deliveries in the interest of crop production.

The prices quoted for straight and acid phosphate in bags to dealers or individuals ordering 30 tons or more in the spring of 1919 was $24 a ton f. o. b. Baltimore, Philadelphia and Cartaret. The price asked for the fall trade is $22.50 a ton. This obviously is not a reduction of 30 per cent—the reduction at which the Department has notified farmers they should be able to obtain mixed fertilizers in the fall of 1919. On July 30 the Department notified all acid phosphate manufacturers that in the future they would be required to base the price of straight acid phosphate on the actual cost of the materials of manufacture and sale, plus a reasonable profit, as a separate commodity, and that the cost of manufacturing mixed goods should not be prorated on the acid phosphate.

THE PRODUCTION OF SEED POTATOES

(Continued from page 5)

insects from affected fields to healthy. Leaf-roll is very severe in 1919. This trouble has formerly been much worse on blue-sprout varieties than with white sprouts of the Green Muontain type, but this year many of the latter are affected as much as 10 to 12 percent.

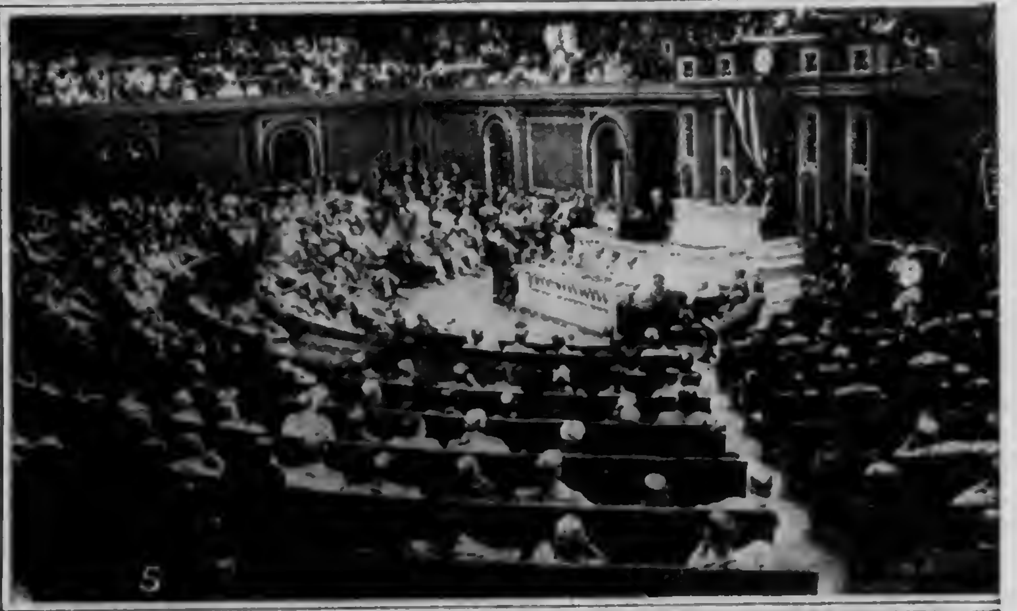
C. R. White, of the New York State Department of Agriculture, now introduced a new note with the discussion. He started by saying that "Our country is just now in a state of hysteria due to our recent coming out from under the anaesthetic given for the removal of the cancer of Hunism." City residents are clamoring for special favor from the government because they are "consumers," forgetting that the farmer is not only a consumer of food but also of many products of the city man's labor. For many years city workmen have been rapidly raising their standard of living until it is now above that of the average farmer. It is small wonder that there are 200,000 people in New York city who are unable to find places to live while at the same time a day's trip along the highways of almost any part of New York state will show many empty houses. Not only are many farms being completely abandoned, but on the greater part of the farms of the state farmers have been forced to give poor care to their growing crops because they cannot with present food prices compete with city industries for labor. The steady emigration to the city is further affecting food production thru so many of the farmers being men of greater average age than in other occupations, the young men going to the city instead of farming.

The potato growers of the Eastern Shore of Virginia have found that co-operation has been of immense value in selling their many millions of bushes of early potatoes upon the city markets in summer. With a live organization furnished with sufficient funds they are able to sell their product with far less risk of loss from swindling buyers than before. Another successful instance of co-operation in selling potatoes is that of the Michigan Potato Exchange.

The writer told New York growers how earnest he had found the Canadian growers in their work of improving their potatoes for sale in American markets. Canadian growers have up till now largely raised potato varieties that were good for local use but since the war began have started to produce a high grade product for sale in the United States, both as table stock and as seed.

Messrs. Smith, Cross and Sweet discussed improved methods of selling certified seed potatoes. A central selling agency has been advocated, and has great advantages. One disadvantage is that no two lots of certified seed are exactly the same in value, and the most careful grower must not be penalized by receiving the same price as another grower who is careless, or at best unsuccessful.

PASSING EVENTS IN PICTURES



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1—Pathfinder Planes Starting Coast to Coast Flight.

2—Mrs. Breckinridge Long, Wife of Third Asst. Secretary of State, who will be official Entertainer of the Prince of Wales.

3—New Pacific Fleet Passing Thru the Panama Canal.

4—Women and Children Seeking Food at American Relief Station in Poland.

5—President Wilson Addressing Congress on Cost of Living.

6—Panama Canal as Seen from Fighting Top of Battleship.

7—Joint Conference on Railroad Control in Session in Washington.

8—Author of Plumb Railroad Nationalization Plan.

9—Attorney General Mitchell Palmer Who is Leading the Campaign Against High Cost of Living.

10—The Late Andrew Carnegie.

HORTICULTURE

BETTER METHODS OF SELLING

Farmers are beginning to realize that they get a rather small proportion of the ultimate price which their products sell for and many of them are waking up to the possibilities which lie in improved methods of selling. Perhaps in no department of farming has the producer been put off with so little as in fruit and truck growing. This may not be true where fruit growers' or vegetable growers' associations have been formed, but in the individual cases of producers who ship to commission houses, the farmer often gets a small share.

I was interested in a case which came to my attention last year. The producer had been accustomed to shipping his small fruits to the nearest large city and often the results were disappointing. One day in passing thru a small town he noticed that the strawberries all came from a dealer in the large city. This gave him the idea. He approached the dealer with the proposition to send him direct whatever berries he needed. The result was that he shipped all the remainder of the season and also sold him other small fruits and garden products. He did not stop with one dealer, however, but visited all the others in the town who looked prosperous and sold to each one. He also tried the plan in three other cities with the result that he sold no more to the large city commission merchant. He averaged more than five cents more per quart for his berries than a neighbor who sold in the old way.

Another fruit grower and market gardener tired of the commission merchant and inaugurated a motor delivery system of his own, delivering to the retail merchants in towns and small cities within thirty miles of his farm, with the result that he paid for the truck in one season. One grower of our acquaintance is a specialist in sweet corn. Last season with an ordinary small car he marketed his corn in a city thirty miles away. By getting the load ready over night and starting early, he was able to be in the city when the retail stores opened.

No branch of farming lends itself so readily to the matter of dealing direct with the retail merchants as strawberry growing From what I have learned of others' experiences and a limited experience of my own, I would not go to the merchant in the large city. Prices are often lower in New York, Philadelphia, Cleveland or Chicago than in Yonkers, N. Y., or Gary, Ind., so go to the latter towns for the best market. Usually there is a considerable market for strawberries right near the grower if he will but cater to it.

Put the product on the market in good condition, put your own name on the crate and dealers and consumers, alike, will soon learn to ask for your berries. The heavy producer may have to depend on the commission merchant but certainly the smaller growers need not and the latter class will find it to their advantage to find their own market in most cases.—C. H. Chesley.

A New York Fruit Grower and His One-Ton Truck

TOMATO DISEASES AND PREVENTIVES

We say Preventives, not cures, for it is seldom that cures can be made after a fungus disease once gets a start. I have had a very striking example of this the present season in my own tomatoes. The young plants that have been transferred to cold frames early in the spring for setting in the open ground after frost disappears should be sprayed with Bordeaux mixture before transplanting, and after setting in the open garden the spraying should be at once repeated and again repeated in ten days. These sprayings will usually prevent the Septorium leaf blight.

This past spring the early sprayings were neglected in the rush of other work and the plants were set and were being trained to stakes when some indications of disease appeared on the lowest leaves. Spraying was at once done very thoroly and repeated in a week, but it seemed that the disease had gotten too strong a hold. The effect was simply a check to it. The plants grew very strong and set a wonderful crop of tomatoes before the disease progressed very far. But by the time the plants reached the top of the five foot stakes there was only a few joints with green leaves near the top, all the lower leaves were brown. The two sprayings saved the early crop, but failed to maintain the health of the plants later. Quick and early work is needed to prevent this leaf blight.

The disease that bothers us very often and is very destructive in the starting of the plants in the greenhouse is the dampin-off fungus—Rhisoctonia. This cuts off the plants at the surface of the soil by rotting the stems. While there are other fungi, parasitic, on the Algae that are brought to the soil in the water used, this one is the chief, and it attacks older plants in the garden, especially when a crust is allowed to form around the stems. It sometimes attacks Irish potatoes, checking growth and making a sort of rosette formation of the tops.

In parts of the great tomato-growing section of the Eastern Shore of Maryland and Delaware the Fusarium Wilt, or sleeping disease, has appeared. Efforts are being made to breed resistant strains by getting seed from plants that live where others around them succumb to the wilt. It is a disease infecting the soil, and where soil is known to be infected it should be avoided for any tomato or potato plants. Under glass, the growers who force tomatoes in winter, depend on sterilization of the soil by steam. This disease is characterized by the gradual wilting of the plant as it nears maturity. The disease lives in the soil for years.

The early blight which attacks Irish potatoes sometimes affects the tomato, but the early spraying with Bordeaux mixture is effective against this.

The blossom end rot, or point rot as some call it, is a rot that is not caused by fungus growth. Unusual conditions of weather, excess of rain, heat, or drouth will favor it. It is more prevalent in droughty conditions than when there is abundant moisture. Check to growth by bad cultivation, and insufficient plant food in the soil will also have much to do with it.

Mosaic disease is characterized by light and dark green leaves and spotted fruits. It is more common in artificial forcing in green houses than in the open ground. Spraying with Bordeaux mixture will prevent it if done in time.

Training plants to stakes is stated by some to reduce the ravages of the Fungus diseases of the tomato, but my experience this season is just the opposite. Two lots of plants of the same age were planted. One lot was staked and trained to a single stem. The other lot was planted some disttance from the stakedlot. The staked plants were under the irrigation pipe and were well irrigated in dry weather. The second lot was allowed to tumble in its natural habit on the ground and took its chances with the weather. As I said in the beginning, the staked plants have lost all their leaves from blight, while the other plants have not been sprayed purposely and yet have escaped the blight so far (August 6).—W. F. Massey, Wicomico Co., Md.

WINTER ONIONS

Those who enjoy early onions should not fail to plant liberally of the top or winter onions in autumn, being sure that any surplus will find ready sale on the market. They commence to grow even under the snow, and are ready for use several weeks before it is possible to raise them from sets.

Prepare the soil as for the spring culture of onions, fertilizing liberally

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with barnyard manure or poultry droppings. The small onions, which grow on the top of the stalks in late summer in place of the ordinary seed, may be planted in rows; or if too small, simply sow them in the row and they will find the way to the surface. One or two cultivations is all that is necessary, and the plants will surprise you with what they will do in the spring.

These onions never form large bulbs, but are more like scullions. They are also a trifle less delicate in flavor. But if the flavor proves too rank,, soak them in salt water for an hour before using and this will be counteracted. As an early spring relish they are sure to be appreciated by all who like onions, and are comparatively little trouble to raise. They will renew themselves each year, both by offsets and bulblets at the ends of the stalks, but the growth is more tender if new plantings are made each season.—Bessie L. Putnam.

Teaching the Boys How to Plant

KILLING WEEDS

Any weed can be killed by persistence, but there are best ways for the different species, and much time and labor may often be saved by studying their habits and working accordingly.

The burdock is a biennial, producing seed and dying the second year. Cutting it down the first year is almost time wasted save that you dodge a bit of untidiness, as it continues to spring up as fast as cut off. Wait until the entire strength of the plant is concentrated in the flowering stalk, which never appears until the second season. Then before the blossoms open cut off the entire plant and you are thru with it, for it has not the strength left to make a new trial. The wild carrot is also a biennial, but has the trick of sending up dwarfed, seed-bearing flowers after it has been decapitated. By turning the infested pasture into a corn field it is easily cultivated out.

The white daisy lives year after year, increasing from seed as well as from offshoots. Ditto as to wild morning-glory, which grows a new plant from every broken root. Thoro tillage, picking out and burning every root, is the only sure cure. Canada thistle may be smothered out by a good crop of grain. Each species has some "kink" for self-preservation. Locate its vulnerable point, and then act and act thoroly.—Bessie L. Putnam.

Five eggs out of every hundred are spoiled by being fertile. Producing infertile eggs does not require anything but the removal of the rooster from the flock after the need for hatching eggs is past.

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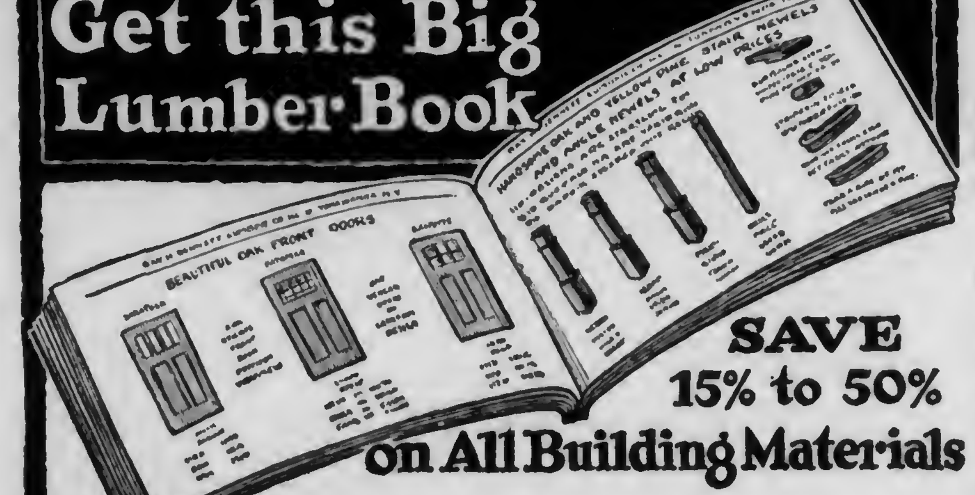

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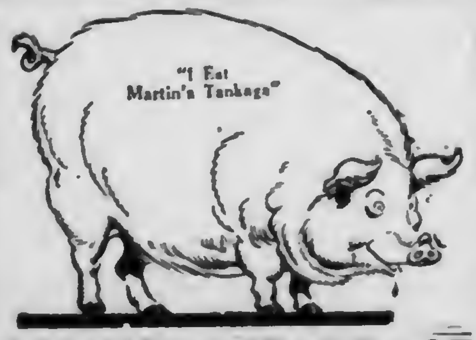

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POULTRY

THE POULTRYMAN'S DIARY

Keeping a diary on a poultry farm saves many notes of interest that help in the improvement of the flock. At some time the points that seem of little account are apt to prove of value and it is handy to have a small book where such information can be quickly found. Frequently a poultryman will visit an institute or lecture on some poultry subject. He may not wish to take full notes but certain points may be emphasized on that day which can be potted down in the diary for future reference.

Possibly a new ration may seem worthy of trial at some future date. Jot it down in the diary and the information will be there when needed. It is handy to refer to the diary and find when the first pullets were hatched or began to lay during the previous year. Certain articles may be advertised that are necessary in future farming operations. Mark down the address and the price in the diary and later it can be looked up without much hunting.

The diary is handy to record data concerning the growing of crops for the hens. Mangels planted at a certain date may do very well while the crop planted later may be hit by the dry weather and not develop to a large size. Next year it is possible to refer to the diary and find when the profitable crops were planted. The same is true of all kinds of green crops which are grown for the hens. Certain notes regarding varieties, soil and time of planting can be noted in the diary and such facts will be of value when preparing the crops in future years.

A diary is a history of progress or failure with the hens and much can be learned about the future by a careful study of the past. Lessons that are learned by experience are less easily forgotten when they are clinched in black and white. By a study of the diary a poultryman can receive a new stimulation for the future. The diary may record certain failures that seemed very serious at the time and yet seem like jokes when they are read a year later. Sometimes a diary can tell a man that he is not such a fool as he was last year and the year before and such encouragement is worth so much that it more than pays for the work of keeping the diary.

The problem of keeping a diary is largely a case of developing it into a habit. At first it seems difficult and certain days will be omitted but as the habit grows it will seem an interesting duty to record a few of the incidents of the day and soon a man will not feel exactly comfortable until he has jotted down at least something to remind him of his day's work.

CULLING THE FLOCK

With the approach of fall days the need for culling the flock becomes apparent, and with no indication of feed prices going any lower in the near future, the wise poultryman will see to getting on the market all birds that do not show up well in the tests for laying qualities. In talks which I have had with a number of poultrymen in this section they all say they will cull closely this fall, in fact, closer than ever. I have not heard of one who will carry thru the winter as many fowls as they did last year. Even the prospect of "dollar eggs" does not tempt them.

Every poultryman and the general farmer who keeps hens as a side line knows he has to get rid of his old hens to make room for the pullets that are coming on, but the problem is to be able to pick out the good layers and discard the boarders. In many cases the choice has been made at random and by guess work, and as a result both good and bad birds have gone to the market.

My ideas on culling the flock have undergone some changes in recent years. Formerly I tried to carry betwen 250 and 300 hens thru the winter, but this year I intend to limit the flock to 180. This will save not only feed, but labor, and my aim is to make these 180 hens produce nearly as much as the 250 did in former years. Like many others I was frequently fooled by the hen with bright, attractive plumage and with yellow shanks. Hen nature appears to be pretty much like human nature. At least we are all attracted by the showy, fluffy kind and too often overlook the good points of the ones that are plain and lack style, be they hens or women.

During the latter part of August and the first weeks in September is a good time to pick out the layers for the winter. When you see a hen still in old feathers and with her shanks a poor color it is safe to set her down as a good layer. The late molters are generally the ones that stay on the laying job the longest. A hen with bright plumage and yellow legs in August is a poor hen to keep.

I have been greatly interested in the system of culling by which one measures with his fingers the distance between the end of the breast bone and the pelvic bone of the hen. While this system is not exactly down to a science, a very good average may be made, say 80 or 90 percent judged by this method may be worth carrying thru as layers. All hens which do not show a width of at least three fingers between these places on their bodies may safely be sent to market.

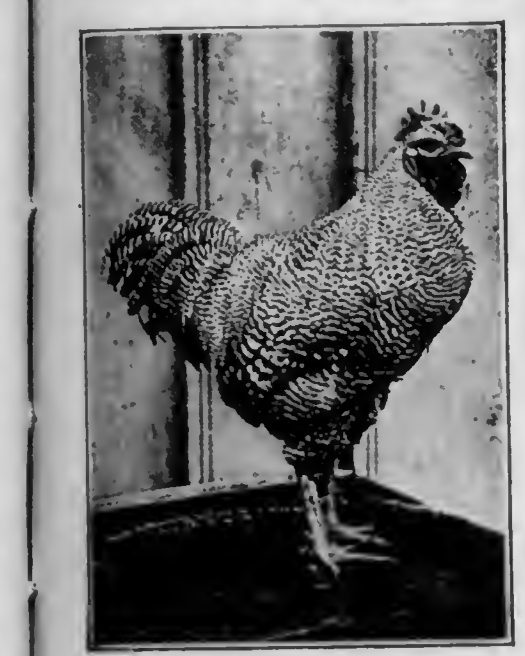
The other week I tested about 30 hens by this method and 18 went in the discard. In order to be sure of my ability along this line, I placed the 18 undesirables in a yard by themselves and fed them extra rations for 10 days to stimulate egg production. I got three eggs during that time, and all three were laid by one hen. The others had the time of their lives, but failed to produce anything in the shape of an egg.
—A. J. Bradley.

The late hatched pullets need forced feeding to put as much growth as possible into them before cold weather. Some breeders try to be economical with the feed and find that they have skinny undersized pullets on their hands which can never pay for the little feed that they have eaten.

THE VINELAND CONTEST

The managers of the egg-laying contest at Vineland, N. J., send out the following announcement in preparing for the next (fourth) year's work:

"No poultry breeder in New Jersey can afford to miss having a pen in the new contest. If you haven't seen a copy of the rules and regulations, speak to your county agent immediately, or write to the Poultry Department of the Agricultural Experiment Station at New Brunswick. The contest just closed has been of great value to the poultry industry of New Jersey and to the breeders who had pens entered. The new contest will be of even greater value. Plans are being made to have regular monthly county competitions between contestants in the contest. Over $1,500 will be given away in prize money.



A Fine Specimen of B. P. Rock

"The new contest will begin the official registration and advance registration of poultry. If you are a breeder and have stock or eggs for sale you should be in on the ground floor in this registration work, or if you are just starting in the game and building up a strain of producers, there is no easier way or no surer way to get the right start than through having a pen in the contest.

"The entry fee is $50 for the three years, which means less than $17 per year. This is lower than any other contest in the country."

MARKETING EGG SUGGESTIONS

The following suggestions should help raise the quality of farm eggs:

1. Breed only from hens which lay eggs of desired size, shape and color.
2. Provide one nest for every 4 or 5 hens in the laying flock.
3. Do not wash eggs; water removes protective coat of the shell and allows the dirt to be rubbed thru the pores into the egg.
4. Keep nests clean, avoiding dirty eggs.
5. Produce infertile eggs for market, as infertile or sterile eggs will not hatch, nor will they spoil as quickly as fertile eggs.
6. Gather eggs as often as possible, and keep in cool, dry well ventilated place. Eggs absorb odors and should not be kept near decaying vegetables, kerosene, etc.
7. Sell only fresh, clean, good-sized eggs. Use small, odd-shaped and soiled eggs at home. Do not hold eggs for a rise in price.
8. Ship only in clean, new standard 30-dozen cases.—L. F. S.

Clean nests mean clean eggs. An egg that is washed is not likely to keep.

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Cletrac
The Cleveland Tractor Co. CLEVELAND, OHIO, U.S.A.

Cletrac TANK-TYPE TRACTOR
(Formerly known as the "Cleveland" Tractor)

The Embodiment of Compact Power—

**More kinds of work
More days in the year**

THE Cletrac Tank-Type Tractor is only 96 inches long, 52 inches high and 50 inches wide.

But in spite of its small size it will do the work of six horses or mules—and has a speed of from forty to fifty per cent *greater* than the *average* tractor.

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Plowing is *only the beginning* of its work. It harrows, plants and reaps, binds, threshes and hauls, grades, saws, and fills silos, spreads manure, digs potatoes and does practically all the other jobs formerly done by animal and stationary power.

Because of its distinctive tracklaying construction the Cletrac is specially adapted to seed bed work. Eight hundred square inches of traction surface enable it to go over soft plowed ground or moist or sandy surfaces *without sinking in and without packing down the soil.*

The Cletrac operates on a surprisingly small amount of gasoline, distillate or kerosene, but is specially designed to use kerosene or distillate.

See your Cletrac dealer *now*, or write us for information and our interesting booklet "Selecting Your Tractor".

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Largest producers of tank-type tractors in the world

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THE man who sifts the ashes knows quite as much about a heating system's economy as the one who enjoys its comfort.

Some ashes are not worth sifting. For example, those that come from the Monroe Tubular Pipeless Heater.

It's a heater that with one pipe and one register, heats every room in a moderate sized house. This sounds too good to be true; but what it has done for others, it will do for you.

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GOOD QUALITY Cutlery Steel
Butcher Knife
Skinning "
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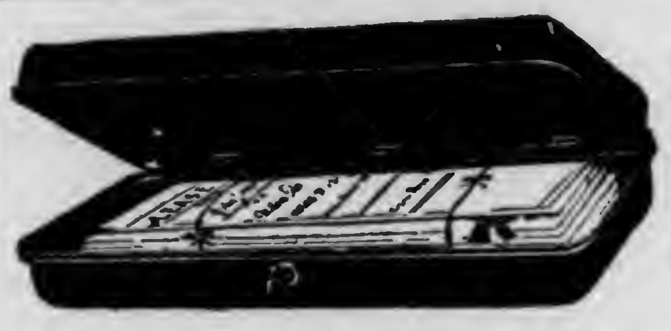
Nothing is more essential than good, sharp butcher knives and plenty of them. This ideal butchering outfit is just the ticket. A knife for every purpose. Six-inch blades, brass-riveted handles.

This three-piece outfit will be sent, prepaid, for three subscriptions for the balance of this year and all of next, or to Jan. 1, 1921, at 75 cents each or with a single subscription and 75 cents additional.

PENNSYLVANIA FARMER, 261 South Third Street, Philadelphia, Pa.



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Every home needs a safe and convenient place to keep Liberty Bonds, Insurance Policies, Deeds, Notes, Receipts and other valuables. This Safety Deposit Box is made of heavy Bessemer steel in beautiful, hard-baked, black enamel. Size 11½ x 5½ x 2½ in. Has lock and two keys. Sent prepaid for two subscriptions for the balance of this year and all of next, or to January 1, 1921, at 75c. each. Or for a single subscription and 50c. additional.

PENNSYLVANIA FARMER, 261 South Third Street, Philadelphia, Pa.

When Peaches Are in Season

All Kinds of Ways to Eat 'Em

For several weeks we have been paying fabulous prices for a taste of the Southern peaches, but now that our own fruit is beginning to ripen we want to enjoy great dishes of our favorite peach recipes. The ways of preparing peaches are many; in addition to your own recipes the following will prove delicious:

Peach Tapioca

One-half cup tapioca, 1 quart water, a little salt and the peaches.

Cook the tapioca, salt and water 15 minutes in a double boiler. Cover the bottom of a baking dish with a layer of fresh peaches and sprinkle ½ cup sugar over them. Pour the tapioca over the peaches, and bake one-half hour. Serve with sugar and cream.

Peaches and Cream

One envelope of gelatin, 1 cup hot milk, ½ cup sugar, 2 tablespoons boiling water, 1 cup cream, the peaches and vanilla.

Fill a deep dish nearly full of sliced ripe peaches, sprinkling the layers with the sugar. Dissolve the gelatin in the boiling water, and add enough hot milk to make 1 cup. Set in a cool place. When cold, beat in the cream whipped to a stiff froth, add the sugar and flavor with the vanilla. Pour over the peaches and serve very cold.

Peach Flummery

One envelope gelatin, 1 pint peaches, whites of 2 eggs, 1 cup boiling water, juice of 1 lemon and ¾ cup sugar.

Cook the peaches in a thin syrup until tender; drain. Mix the gelatin and sugar and dissolve in boiling water, add the lemon juice and enough peach juice to make 1 pint. When beginning to jelly, add the stiffly beaten egg whites, beat all together until rather stiff and pour over the drained peaches. Serve very cold.

Peach Cake

Bake a sponge cake in a deep pan and when cold remove the top, hollow out the center and fill with the following mixture: Dissolve 1 envelope of minute gelatin in 2 tablespoons boiling milk, and add enough milk to make 1 pint. Add the yolks of 2 eggs well beaten, ½ cup sugar, and flavor with vanilla. When the jelly begins to thicken, pour into the cake hollow, cover with a layer of peaches, then let harden, then add more custard, place the top in position, and frost.

Peaches in Jelly

One envelope gelatin, ½ cup orange juice, juice of 1 lemon, 1 cup boiling water, 1 cup sugar, some ripe peaches.

Mix the sugar and gelatin and dissolve in boiling water. When cool add the orange and lemon juice, pour over the ripe peaches, sliced thin, and place on ice. Serve with cream.

Peach Pudding

Prepare your peaches as for stewing, put into a pudding pan and sweeten to taste. Make a 1-egg cake batter, pour it over the peaches and bake in a moderate oven. Serve hot with hard sauce.

Peach Snow Drift

Cook 1 pint of milk and 1 tablespoon cornstarch over hot water until the milk thickens, sweeten and flavor to taste. Put a layer of peaches, cut in halves, in bottom of dish, then a layer of the cornstarch "cream," and so on until all is used. Cover with a meringue and brown in a moderate oven.

Peach Delight

Cut peaches in halves and pare, putting 2 layers in a deep baking dish, sprinkle with sugar and a little flour. Scatter bits of butter over the top, add 1 cup cold water and cover with a rich crust. Bake a delicate brown. Serve hot with cream.

This Jersey Lady Is After High Honey for Her Preserving. She Grows It Herself Down at Shiloh

Peach Tart

Line a pie dish with good biscuit crust, pare and cut some peaches in halves and remove stones. Heap them in the dish, sprinkle on lightly ¾ cup sugar, add ¼ cup water and bake in a quick oven ½ hour. Serve hot with cream.

Cream Peach Pie

Pare and slice ripe peaches, and cook in enough water to prevent burning, sweeten to taste. Cool, and fill pie crust previously baked, cover with sweetened and flavored whipped cream and serve at once. Instead of the whipped cream you may use a meringue made of the stiffly beaten whites of 2 eggs and 5 tablespoons sugar; brown this meringue in a slow oven.

Baked Peaches

Pare, cut in half and remove stones from ripe peaches. Place in a shallow granite pan, fill each cavity with 1 teaspoon sugar, ¼ teaspoon butter, a few drops of lemon juice and a slight grating of nutmeg. Bake 30 minutes, and serve on circular pieces of buttered dry toast.

To Can Peaches

Wash peaches, cut in halves and remove the stones. Blanch in boiling water until the skins are loose, dip in cold water and slip off the skins. Pack neatly in glass jars pit side down, fill jars with boiling syrup (2 cups sugar to 1 cup of water), put lids on loosely and sterilize 15 minutes in water bath in your boiler. Remove jars and seal tight at once. Boiler must be covered with tight-fitting cover during the cooking, and the 15 minutes must be counted from time water-bath begins to boil.

Peach Jelly

If you pare your peaches, wash the parings thoroly and put them in kettle with water to cover them, then boil until soft, strain. For each pint of juice take 1 lb. sugar, and for about 6 pints add the juice of 2 lemons. Then make like any other jelly.

Peach Butter

For every pound of peaches, weighed after paring and stoning, allow ½ lb. sugar. Blanch and peel the peaches, which should be very ripe; cut in pieces and put thru sieve. Heat the pulp slowly, and cook, stirring occasionally until it is the consistency of marmalade. Add the sugar, stir until it is dissolved, then cook rapidly 15 minutes. Place kettle on the back of the stove, where the butter will not become cooled until it is quite solid. Pack in jars or tumblers and seal.

Spiced Peaches

Seven pounds peaches, 4 lbs. sugar, 1 pint vinegar, 3 cloves stuck in each peach, ½ oz. ground cinnamon tied in a bag.

Make a syrup of the sugar and vinegar, cook the peaches a few at a time, place in a crock. Cook the syrup 30 minutes longer, then pour it over the peaches, place a cinnamon bag among the peaches and cover with plate. Tie up when cold.—Mrs. F. W. Stillman, Union Co., N. J.

THE COMFORTS OF FARM AND CITY HOMES

Why do not country people buy more ready-made clothes and labor-saving devices and adopt convenient methods of living so common in cities?

The usual answer is lack of cash. A farm seems to be abundantly supplied with food, shelter, water, air—all the prime necessities of life except money. So every nerve is strained to make that little money go as far as possible, by purchasing little that can be produced at home, and doing without many other articles that would save labor and strength.

It is often claimed that on all first class farms the food is home raised. Is so, every farm must have its own pigs and beef; chickens for meat and eggs; cows for milk, butter and cheese; flour from home-raised wheat ground at the country mill; broom corn for the years supply of brooms; home-made soap; home-raised garden seeds; home-made clothes. Nothing is to be bought that can be done without or manufactured at home, because there is a time-honored tradition from the beginning of time that the ideal farm is self-supporting. But with every one of these home industries I have noticed that the main part of the work pertaining to them must fall on the women of the house.

Such a self-supporting home makes a very pretty picture. It is very impressive to the city guest when the host remarks, "everything we have on the supper table is home grown."

But stop! Think a moment! A farm is not just a home anymore, altho it may have been in the pioneer days. No family now produces all the clothes, food and other supplies that are needed. More and more, a farm can be compared to a factory. Those things that are profitable are produced in quantities to be turned into money to buy those things that cannot be readily or economically grown or manufactured at the home plant. And this tendency ought to be encouraged. Nothing should be made or produced on a farm unless careful study and analysis of the particular conditions of wealth, health, soil, markets and climate prove that such action is worth while.

I realize that this theory is somewhat contrary to the teaching of state and government agencies. There have been quantities of literature and propaganda spread over the country within recent years advocating and giving information on the best ways of preserving meat, drying fruit, drafting patterns, making clothes, etc. All of the instruction is of the best. I appreciate it thoroly and have as many such bulletins as I can secure on file, for study and reference. But I do not believe that every farm or every household can practice all these home industries with profit Everything possible should be done away from home—laundry work, bread baking, sewing—there will still be plenty left to do.

It is very easily seen that the fewer home industries that are practiced, the more time and energy there is left to devote to the main things of importance. The more goods produced for sale, the more money there is available to buy other commondities. It hurts the average farmer's pride to spend money for something he knows might have been produced at home He judges his management by the size of the bill at the country store. A small bill spells efficiency; a large bill means sheer extravagance.

Home the Factory Office

The house and all its expenses are too often considered a dead loss. Instead, it ought to be looked upon as the factory office, around which all the activities are centered. The farm on the same ground as his business. His house is the office. Everyone of the family is an employee, co-operating to make the plant a success. Every department must be run efficiently and paying its way for the time and energy expended or it is a loss and a drag upon the whole factory.

Now if the farmer is wealthy he can run all his departments at a loss if need be, so as to say "everything is home grown," but in doing so he is simply digging into his pockets for funds to support the farm and his personal fancies. Yet a large majority of our farms are run on this scheme—as tho the farmer was a country gentleman conducting his acres along the lines of a millionaire's hobby insteady of a factory for earning money.

The chief object of the farm-factory is to produce crops for sale so as to make money for the workers. Therefore all energies should be directed toward that specialty or specialties for which the farmer and the land are best adapted. No farm crop grows successfully in this age without a considerable amount of machinery, equipment, literature, study and thought being expended on it. It is physically impossible for any man, even with a faithful wife and many willing children, to keep up with the most improved methods of producing everything from cheese to broom corn. Some of these things will be produced for home consumption, only by the expenditure of a lot of effort that could be better utilized if applied to a crop that would bring in actual cash.

Let me take a typical farm as an example. Let us say a dairy farm of the East. It ships whole milk to market, with accompanying crops of corn, alfalfa and grain. The main problems here are cows, milk production and its care, corn breeding, alfalfa growing, insect and fungous pests of grain crops. With all the variations that lead to intensive farming, there are dozens of lines that demand constant study and reading, with specialized equipment.

If the farm stores its own pork and beef, then these animals are consuming food that might have been profitably used as cow feed. The food eaten, therefore, had a dollars and cents value, even tho the farmer may think it costs nothing. The care and preservation of the meat means days of hard work, salting, drying, smoking, canning, making lard, suet, and finally turning the surplus fat into soap. Of course the cost is less than if that much meat and fat had been purchased at retail.

If butter is made for home use, then a lot of milk must be reserved. It has been proved many times that market milk at market prices cannot profitably be made into butter or cheese. So that family would save labor, time and money by selling their milk and buying the butter and cheese used at home.

Every farm should have its own chickens, but when broilers are selling at retail, as now, at upward of $1 a pound, and chickens at 50 cents, I think the farmer's family should think twice before indulging recklessly in poultry as common diet. Chicken is a luxury for rich people in the city. Why should farmers, more than other classes, live beyond their means and eat all their profits?

Every farm should have its own garden — not a back-yard patch worked by the women of the family, but a real man-sized affair that can be plowed and cultivated with a horse. Then there will be enough fresh vegetables and small fruits to keep the family happy the year thru, without fretting over a lessening of the meat supply.

As for clothes—of course home-made ones last longer, but they also cost more in the material and labor. Are you sure that the effort is worth while? I doubt it, especially for underclothes, aprons and men's shirts. Everything a woman or a family needs can be bought ready made.

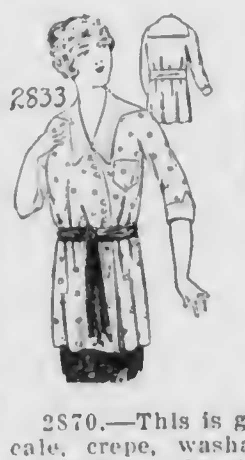
Now do you see my answer to the question as to why a country woman has a harder life than the woman in the city? She is trying by sheer will and main strength to carry on the work, not only for her home and family, but also of a number of industries that ought to be performed by specialists. She saves some money, but in so doing is prevented from taking part in the larger effort that would be more profitable to the farm as a whole.

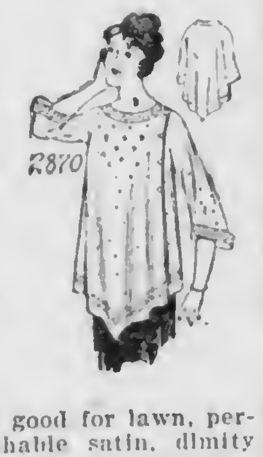
PENNSYLVANIA FARMER PATTERNS

Give figures and letters of each pattern exactly as printed at beginning of each description or we will not be responsible for correct filling of orders. Give bust measure when ordering waist patterns, waist measure for skirt, and age for children's patterns. Address Pennsylvania Farmer, 261 S. Third Street, Philadelphia, Pa.

HANDY HOUSE JACKETS

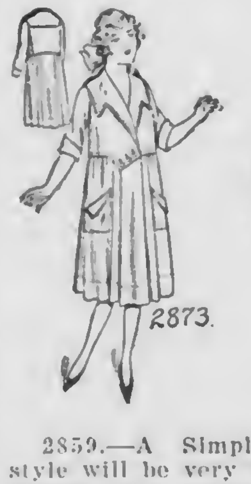
2833.—This model is nice for figured crepe or voile, for silk, lawn or percale. Flannel, albatross and gabardine are suitable for cold weather wear. The sleeve may be finished in wrist or elbow length. Pattern comes in 4 sizes: Small, 32-34; Medium, 36-38; Large, 40-42; Extra Large, 44-46 inches bust measure. A Medium size requires 3¾ yards of 36-inch material. Price, 10 cents.

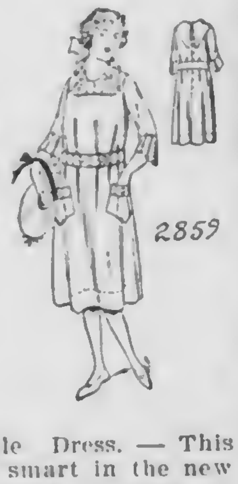




2870.—This is good for lawn, percale, crepe, washable satin, dimity or batiste. The sleeve is cut in one with the body. The pattern is in 4 sizes: Small, 32-34; Medium, 36-38; Large, 40-42; Extra Large, 44-46 inches bust measure. Size Medium requires 3½ yards of 36-inch material Price, 10 cents.

2873.—New Frock for School.—This will be very attractive in linen, repp or chambray, with embroidery or braid trimming. It is good also, for gingham, percale, poplin, silk, gabardine and serge. The pattern is cut in 4 sizes: 8, 10, 12 and 14 years. Size 12 will require 5⅞ yards of 27-inch material. Price, 10 cents.





2859.—A Simple Dress. — This style will be very smart in the new linens, with trimming of pique or cotton corduroy. It is nice also for gingham, percale, seersucker, lawn, crepe, repp and poplin. Pockets and cuffs could be omitted. The pattern is cut in 4 sizes: 8, 10, 12 and 14 years. Size 12 requires 3⅞ yards of 36-inch material. Price, 10 cents.

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Now—No Longer a Drudge

Four hours firing that kitchen range to get two hours ironing done—that won't do for the modern housewife. She knows it's not necessary.

The dirt-making, back-breaking old kitchen stove is a thing of the past in more than a quarter million country homes; they are all served with carbide gas from plants like the

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261 South Third Street Philadelphia, Pa.

Markets

MARKETS CLOSED ON LABOR DAY

Owing to the fact that almost all markets were closed on Saturday and Monday on account of Labor Day celebrations few of our weekly market reports were available for this week's issue.—Editors.

REVIEW OF FRUIT AND VEGETABLE MARKET

Values Irregular, Shipments at Steady Volume

Direction of prices was still downward for potatoes, watermelons and grapes, but values held about steady in onions, cabbage, and pears, and there were partial recoveries or advances in peaches and cantaloupes. Complaints of car shortage were noted especially in western producing section. Shipments continued at about the volume of the past two weeks with 12,432 cars, which is about twenty percent greater than for corresponding time a year ago. Shipments of various commodities were in general about the same as last week. Shipments compared with last year at this time were considerably larger for potatoes, watermelons, sweet potatoes and peaches.

Potato Markets Show General Decline

Prices fell 25@75c but showed tendency to recover at the close. Supplies are generally increasing as height of season approaches. New Jersey Cobblers sacked declined, but closed at slight recovery at $3.20@3.25 per cwt., f. o. b. shipping points, and ranged $3@4 in consuming markets. New Jersey Giants dropped to $2.35@2.40 f. o. b. shipping points and to $2.65@3.50 for jobbing sales. There was complaint of rot in producing sections. Minnesota Early Ohios declined to $2.15@2.60 per cwt. sacked, f. o. b. shipping points, and lost about 40c carlot prices in Chicago, ranging, $2.40@2.65, but ranged $3.15@3.50 in middlewestern jobbing markets and ruled $4.25 in New Orleans. California sacked white stock sagged to $2.25 f. o. b. shipping points. Idaho white stock ranged steady. Shipments increased to 3,612 cars compared with 3,114 last week. New Jersey shipped 1,301 cars, Minnesota 788, Maine 454.

Onions Dull and Nearly Steady

Values held much better than in preceding weeks and there were some gains. Eastern yellow stock ranged firm at $3@3.75 per cwt. sacked in eastern markets. Middlewestern reds in middlewestern and southern markets ranged $2.75@3.50 and yellows $3@3.25. California yellow stock was nominal at $2 f. o. b. shipping points with little movement and ranged fairly steady in middlewestern markets at $2.75@3.50, Australian Browns ranging $3.25@3.75. Washington yellow jobbed at $3@3.50. Shipments 436 cars compared with 374 last week. California shipped 161, New York 88, Massachusetts 59.

Peach Markets Closed Generally Higher

Supplies showed considerable increase but values were well maintained with important recoveries in several leading eastern markets. California Elbertas followed a stronger range at auction sales, mostly 80c@$1.50 per box. Maryland, Virginia and Pennsylvania Elbertas strengthened to $3@3.75 per bushel basket in most consuming **markets** and recovered in Boston to a range of $-3. Maryland Elbertas at shipping **points** were firm at $2.85@3. New Jersey Elbertas ranged $2.50@2.75 per bushel basket in New York City. Colorado Elbertas ruled $2.25 per bushel basket f. o. b. shipping points and were quoted $3.75 for jobbing sales in St. Louis. Shipments 2,395 cars compared with 1,867 last week. California shipped 559, Colorado 501, Washington 553 and New Jersey 238.

Cantaloupe Values Show Recoveries

California Turlocks, standards 45s, strengthened in most jobbing markets to a general range of $2@3.25 but declined to $1.25@1.75 in Kansas City and Detroit, and reached $3@3.50 in Boston. Colorado, Rocky Ford district, salmon tints, standards 45s, closed firm at $1.85@2.10 f. o. b. cash and at $2.50@3.50 in middlewestern consuming markets. Delaware stock was firm at 50@75c for standards 45s, cash to growers. Maryland and Delaware cantaloupes standards 45s, ranged $1.25@2 in New York and Boston, but sold at 50c@$1 in Philadelphia. Shipments 716 cars compared with 897 last week.

Watermelons Lower at Shipping Points

Declines continued in producing sections while consuming markets showed a somewhat more settled condition. Missouri Tom Watsons, medium sizes, including some inferior stock, closed at $30@100 per car in producing sections and ranged $125@300 per car in most consuming markets, reaching top of $125 in Pittsburgh. Markets quoting per 100 melons ranged $25@35. Maryland and Virginia stock was quoted in consuming markets about steady at $250@300 per car. Texas Tom Watsons ranged $125@200 per car in Chicago. Shipments 1,711 cars compared with 1,894 last week. Missouri shipped 711, California, Delaware, Indiana, Iowa shipped 100@150 cars each.

Other Fruits and Vegetables

California Bartletts followed a general range at auction sales of $1@5.25 per box. The range in New York City was firm at $4@5. Northwestern Bartletts ranged $3.10@4.10 in New York and $1.75@3.35 in Chicago with extreme general range of $1-4.10. Shipments 567 cars compared with 1,090 last week. California malaga grapes, 4s, followed a weaker range at auction sales of $1.75@2.75. Thompson Seedless ranged $1.35@2.50 and Tokays $2@3.25. Colorado cabbage continued steady at $1.15 per cwt., in bulk cash to growers, but sold lower in St. Louis at $40@50 per ton bulk. Southern markets quoted small lots California and Colorado stock at $3.25@4.50 per cwt. New York cabbage ranged $50@55 per ton bulk in Baltimore. Shipments 340 cars of which 206 were from Colorado. Dry bean shipments 169 cars compared with 85 last week. Sweet potato shipments continue to gain, 497 cars compared with 310 last week.

GENERAL CONDITION OF POTATO CROP

Colorado.—Too dry in most dry land sections for a good crop except a few counties, including Elbert, ElPaso and Lincoln. Exceptionally good in the San Louis Valley and condition good in other high altitude localities. Some insect damage in Sedgwick County reported.

Connecticut and all other New England States: Fair to good crop. More or less blight in Massachusetts and other southern sections.

Delaware. Sweet potatoes are promising. Irish potatoes are rotting from too much rain.

Georgia. Sweet potatoes are being injured by excessive rains.

Illinois. Late white potatoes have been benefited by rains. Yield will be fair in some sections and very small in others. Harvesting of sweet potatoes starting. Fair yields resulting. Quality very good.

Indiana. White potatoes will only be about one-half a crop altho recent rains helped them considerably and greatly benefited sweet potatoes.

Iowa. The hot weather of July injured the late potato crop beyond recovery. Exceptionally poor in the northeastern section. Sweet potato crop in the Muscatine section is reported better than usual.

Kentucky.—Late crop not making satisfactory growth, due to drouth.

Louisiana. Fall planting of Irish potatoes delayed by rains. Sweet potatoes give fine promise on an increased acreage.

Maryland. Late white potatoes are having too much rain which is causing rot. Sweet potatoes are still promising a good crop.

Minnesota. Early crop being placed on market, yield rather light. Late crop shows some improvement weather being favorable.

Montana. Much in need of rain.

North Dakota. Late crop improved to some extent by August rains but State crop is below average.

Ohio. Late crop improving.

Nebraska. Part of the commercial crop improved slightly but the balance of the crop will be short. Farm crop will be slightly better than a half crop.

New Mexico. Crop affected by blight.

New York.—An excellent crop is beginning to be harvested on Long Island where 40 percent of the carlot shipments of the state originate. In other sections prospects are only fair. Early potato crop has been reduced by blight and local drouth.

LANCASTER PRODUCE MARKET

Lancaster, Pa., Sepetmber 1, 1919.

Labor Day found quotations on the local markets just as high as ever, with fine peaches selling higher than last year and eggs bringing 65 cents per dozen, a new September record for this county. Some eggs were held for 68 cents, but were unsold at the close of transactions.

Butter and Eggs.—Creamery butter, 65c lb.; country butter, 65@70c lb.; eggs, 62@65c doz.; ducks eggs, 60c doz.; goose eggs, 10c each.

Poultry.—Dressed old chickens, $1.75@2 each; dressed young chickens, 65c@$1; no live chickens offered.

Vegetables.—Spinach, 20c per ½ pk.; turnips, 15c per ½ pk.; potatoes, 25@30c per ½ pk.; do., $1.75@2 bu.; sweet potatoes, 35c per ½ pk.; cabbage, 5@10c head; cauliflower, 10@15c head; lima beans, 20@25c lb.; do., 50c quart; tomatoes, 6@8c bx; do., 60@65c basket; beans, 10@12c per ½ pk.; beets, 5c bunch; corn, 10@25c dozen ears.

Fruits.—Apples, 15@35c per ½ peck; watermelons, 35@85c each; cantaloupes, 5@8c each; pears, 5@15c box; peaches, $1.50@$2 basket; do., 10c box; huckleberries, 25c box.

Grain Market.—Wheat, $2.20 bu.; rye, $1.65 bu.; oats, 85c bu.; corn, $1.95 bu.; timothy hay, $30 ton; mixed hay, $28 ton; wheat straw, $10 ton; oat straw, $5 per ton.

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YORK PRODUCE MARKETS

York, Pa., Sept. 1, 1919.

The tendency toward lower prices and a general falling off in the demand has continued from last week. This is partly counter-balanced by the decline in the amount of produce offered. Digging of the potato crop has begun and the yield is not nearly what it should be. In fact, in some localities it is lower than was anticipated. The belief was that where the blight had not damaged the crop up to July, that there would be a good chance for a fair yield. This has turned out otherwise as shown by the digging.

Eggs.—Slow, 48@50c per dozen.

Butter.—Country, 45@55c lb.; separator, 60@65c lb. Milk, 10c quart.

Poultry.—Hens, 27@28c lb.; springers, 28@32c lb.; dressed, 75c@$2.

Vegetables.—Potatoes, 15@30c ½ peck; $1.75@2 per bu.; cabbage, 3@7c head; lettuce, 2@5c head; beets, 5c bunch; onions, 6c bunch; 20@25c ½ peck; lima beans, 35@45c quart; soup beans, 20@25c quart; celery, 5@10c stalk; egg plants, 5@10c each; beans, 10@15c peck; lard, 38@42c pound.

Apples.—10@50c ½ peck; plums, 7@20c box; peaches, 10@15c box; 40@50c ½ pk.; $1.50@2 basket; cantaloupes, 10@15c each; watermelons, 10@20c each.

Retail Grain Market.—Wheat, $2.40; corn, $2.25; oats, $1.01; rye, $1.65; bran, $3 cwt.; middlings, $3.60 cwt.

Wholesale Grain Market.—Wheat, $2.15; corn, $2.10; rye, $1.40; bran, $54 per ton; middlings, $70 per ton; oats, 80c bu.

LIVE STOCK MARKETS

Pittsburgh, Pa., Sept. 1.—Cattle lower; supply, 125 loads; prime, $15.75@16.50.

Sheep.—Strong; supply, 15 double decks; prime wethers, $10.50@11.25; culls and common, $3@5; lambs, $8@15.

Veal Calves.—$22@22.60.

Hogs.—Higher; supply, 20 double decks; prime heavies, $21@21.25; medium and heavy yorkers, $21.50@21.75; light yorkers, $21@21.25; pigs, $20@21; roughs, $17@18.50.

Lancaster, Pa, Sept. 1.—Cattle.—Receipts, 7,260, against 4,724 last Monday; market brisk, prices steady; good to choice steers, $13.75@15.75; fair to good steers, $13.25@13.85; medium to fair steers, $12.25@13.10; common to medium steers, $10@11.65; smooth and fat bulls, $11.50@12.60; medium to good bulls, $10.25@11.50; common to medium, $8.25@9.40; smooth and primo heifers, $12.10@13; common to medium heifers, $8.75@10.25; good to choice cows, $8.75@10.25; fair to good cows, $7.25@8.40; common to medium cows, $5.50@6.40; stock bulls, $9@10.40; good to prime calves, $20@20.50; medium to good calves, $18.50@20; common to medium calves, $12.50@14.25.

Hogs.—Receipts, 233; market active, prices steady; good to prime, $22.50@23; light to medium, $21@22; roughs, $18.50@20; stags to sows, $18@19.

Chicago, Ill., Sept. 1.—Hogs.—Receipts, 12,000; estimated tomorrow, 16,000; market closed dull; better grades mostly 50c to 75c higher than Saturday's general trade; steady on packing grades; top, $20.85; heavy, $17.50@19.50; medium, $18@20.85; light, $19.50@20.50; light lights, $19@20; heavy packing sows, smooth, $16.25@17; packing sows, rough, $15.50@16.25; pigs, $16.50@19.25.

Cattle.—Receipts, 17,000; estimated tomorrow, 14,000; few best steers and she-stock steady to 25c higher; other killing stock, feeder and butcher cattle slow to 25c lower; westerns and calves steady; beef steers, medium and heavy weight, choice and prime, $15.75@18 medium and good, $11.50@15.75; common, $9.50@11.50; light weight, good and choice, $13.50@17.50; common and medium, $9.25@13.50; butcher cattle, heifers, $6.75@14.50; cows, $6.50@12.75; canners and cutters, $5.50@6.50; veal calves, $19@20.50; feeder steers, $7.25@12.75; stocker steers, $6.75@10.25.

Sheep.—Receipts, 30,000; estimated tomorrow, 32,000; top, natives, $14; westerns, $15; sheep about steady; feeders slow; lambs, 84 pounds down, $12@15.25; culls and common, $7.75@11.50; yearling wethers, $10@11.25; ewes, medium and good, $7.25@8.50; culls and common, $2.50@6.50.

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NEW YORK MILK MARKET

New York City, Sept. 1, 1919.

There was a decided improvement in the demand last week and the surplus was rapidly disappearing. The rate for September for 3 percent milk in 200-210 mile zone is $3.20 per 100 lbs.; the 3.06 percent milk is $3.44 and the 4 percenta $3.60.

Receipts of milk and cream in 40-quart cans for the week ending August 30th, 1919, were as follows:

Railroad	Milk	Cream
Erie	39,517	3,368
Susquehanna	5,910	90
West Shore	14,213	2,161
Lackawanna	59,072	3,044
N. Y. Central (long haul)	141,450	3,179
Ontario	44,462	1,910
Lehigh Valley	43,218	1,496
New Haven	6,622	72
Pennsylvania	12,220	477
Other Sources	6,200	250
Totals	372,884	16,047

NOTE.—Total last week should have read 370,112 cans of milk instead of 326,112 cans. LACKAWANNA was listed as 6,028 and should have been 60,028.

WOOL MARKETS

The Boston "Commercial Bulletin" of August 30 says: "There is a better tone to the market this week. Sales have not been of large proportions, but there has been somewhat more business, and with the improvement in exchange and with the manufacturers a long way from 'covered' on raw material more confidence exists.

"The foreign markets are firm and the tendency is higher in Europe. The manufacturing situation is hardly changed, the call for deliveries being very insistent."

Michigan and New York Fleeces.—Fine unwashed, 63@64c; delaine unwashed, 78@82c; ½-blood unwashed, 75@78c; ⅜-blood unwashed, 68@69c.

Wisconsin, Missouri and Average New England—½-blood unwashed, 72@75c; ⅜-blood, 67@68c; ¼-blood, 65@66c.

Virginia, Kentucky and Similar—½-blood unwashed, 81@82c; ⅜-blood unwashed, 73@75c.

CROP REPORT

For Week Ending August 23d, 1919.

Details

Corn: In the eleven great corn producing states the general conditions are, as follows: five states, good to very good; one state, very fair; three states, fair; and two states, poor to 66 percent. Taking the minor corn producing states into consideration, the crop in general is well above the average.

Wheat: The ten states, producing the major portion of winter wheat range, one, fair to good; eight, fair; one, poor to fair. The five spring wheat states range two fair; three, poor to fair.

Oats: Uniformly range fair to light.

Cotton: This crop at the present time is very uncertain as the plants are stopping to bloom and are not forming any more bolls. From the present indications it is fair to assume that the cotton crop will be somewhere around 65 percent of a normal average crop.

Potatoes: The estimates on the Irish potato crop are still declining. This is particularly true in Utah and some of the heavy potato producing states in the east.

Cow Peas: As pointed out in a former report this crop is proving itself to be scarce.

Grapes: All reports on grapes indicate that this crop will be rather heavy.

Apples: The early varieties of western apples such as Jonathan and Kings are of good size and are coloring rapidly. Canning plants in the west have been receiving fruit in such abundance that part of it had to be placed in cold storage for the canneries to catch up. This was due to warm favorable weather maturing crop all at once.

Tomatoes: This crop was heavily damaged in the large canning centers of Maryland and New Jersey by severe storms. Crop probably having been cut to one third of the normal.

Weather Conditions: Indicate that improvement has taken place in the far western states, particularly in Montana, Washington and Utah as regards the breaking of drought conditions, while the southern states have had somewhat less rain than in past weeks. The states of Maine and Kentucky are somewhat too dry. This condition also prevails in various states locally. Severe storms in Maryland and New Jersey have damaged small grains, hay and fruit. If the wet weather conditions continue, corn will be hurt.

Country at Large: A recapitulation of forty-one states reporting indicates that eleven, are good; sixteen, average or better; fourteen, fair. This summarized indicates that the country as a whole is in a good average condition agriculturally.—Report by American Steel & Wire Co.

NEW VARIETIES OF PEACHES

Several hundred seedling peaches both parents of which are known, came into bearing in the orchards of the horticultural department of the New Jersey Experiment Station this year. The department has been working since 1914 to secure improved varieties of peaches.

Some of the most promising that have fruited this year are the result of crossing Belle by Greensboro. A number of these produce large, oval, bright attractive fruits of good quality which ripen about the Carman season and promise to be superior to that well known variety.

A cross between the Belle and Early Crawford has produced a yellow peach which ripens about a week to 10 days earlier than the Belle. But what seems to be among the most promising is a fine quality fruit produced by crossing the Elberta and Early Crawford. It has the shape and color of the Elberta, but is better in quality and ripens about ten days earlier.

Rot, which has been so prevalent in South Jersey, causing a 50 percent loss in some districts, has not affected many of the seedlings.

CHICAGO CORN LOWER

Chicago, August 30.—The embargo placed by the United States Grain Corporation on all grain shipments to Atlantic and Gulf ports had a depressing influence today on the corn market and was felt still more by oats traders. An advance of more than $1 in live hog prices went unnoticed and bear pressure was exerted on corn prices virtually thruout the session, except for an early flurry, when short covering sent the corn prices well away from the low points. Later liquidation, particularly in the September article, was evident, and prices sagged all along the line. A slight rally preceded the close. Corn closed steady, ¾c to 2⅝c net lower, distant deliveries showing the greatest decline. September finished at $1.77¼ to $1.77¾ and December at $1.36¼ to $1.36½. Oats lost from 1c to 1⅜c.

Cash corn prices were about 1c lower than yesterday and receipts were larger than of late.

Oats at the start were inclined to move with corn, but later developed independent weakness, the effect of the transportation suspnsion being greater on oats than on the major grain. Domestic demand was only of fair amount.

WHAT BECOMES OF THE MILK FROM 23,000,000 COWS?

Most of It Used Fresh, But Butter a Close Second Consumer

An interesting and valuable study of the uses to which milk is put in commerce, is made by the house organ of the DeLaval Creamery Machinery Company, which apportions the distribution as follows:

43.1	percent used as liquid milk.
41.0	percent used for making butter.
5.0	percent used for making cheese.
2.9	percent used for condensed milk.
3.7	percent used for making ice cream.
4.3	percent used for feeding calves.

This 2.9 percent used by the condensers is the milk from 480,000 cows. The United States now has about 23,000,000 dairy cows. Europe has lost 22,000,000 in the last few years and there is no chance for replacement, for having no cows, there can be no calves, and no importation of cattle can be permitted for at least a year, as ship tonnage is needed for food. So it looks as tho our condensers and butter makers can look forward to a big foreign business.

DECREASE IN LUMBER CUT

The lumber cut of the United States in 1918 was 29,362,020,000 feet, as reported to the Forest Service up to June 15 by 14,753 mills. The complete total cut is 31,890,454,000 feet, based on the assumed operations of 22,546 mills. The computed cut in 1918 is 11 percent smaller than the computed production in 1917.

A comparison of the computed cut of several of the larger general producing regions in 1918 with the figures for the preceding year shows a smaller output by approximately 20 percent in the yellow-pine group of States, a decrease of 19 percent in the North Carolina pine group, and of 9 percent in the Lake States. An increased cut of 2 percent is noted for Oregon and Washington.

The month just passed is to be marked in red by all farmer interests because of the passage of the Daylight Law repealer over the veto of the President; the cancellation of the potash import restrictions by the War Trade Board; the awakening of the public to the inadequacy of superficial remedies for the H. C. of L. by the bold stand taken by agricultural interests before Congress and the President, charging wastefulness and extravagance and unwillingness of other interests to perform a full day's work for a fair day's pay as the real cause of the under-supply of necessities of life; and the knockout blow delivered at the now notorious "Plumb Plan" by The National Grange. In these four events organized farmers found their strength, and their method of accomplishing definite results. It presages a more hopeful outlook for fair consideration of farmer interests in the coming weeks and months of legislation.

Those who study plant diseases put their O. K. on Japanese barberries. The tall growing, green and purple-leaved varieties are the ones that harbor wheat rust.

Farmers will do well to encourage their boys to engage in the junior club work if they wish to encourage them to stay on the farm. It will help make the boy a partner.

Many farmers are pooling their interests and purchasing fertilizers together in car load lots. Have you tried it?

FACTORS IN WHEAT GROWING

(Continued from page 3)

the quality of the grain and that upon the yield. The quality of the grain is generally determined by the plumpness or weight of the kernel. In 1919 the kernels from the unfertilized plots were so small and shrivelled that 1,456 were required to weigh an ounce. The kernels from the plots receiving complete fertilizer were so large and plump that only 800 were needed to weigh an ounce. This is illustrative of the results secured from other treatments in the same series, namely, that where the proper balance of plant food was not maintained, the grain suffered in quality. For example, where nitrogen was used alone, the grain was even more shrivelled than on the untreated plot; 1,915 kernels being required to weigh an ounce. It is well known that nitrogen in excess will often shrivel the grain. A careful examination of a large number of fields in the state showed that the quality and yield of wheat were closely correlated with the kind and amount of fertilizers used, and that the diseases so prevalent in 1919 had far less effect where the cultural conditions and the fertilization of the crop were carried out in the proper manner.

Time of Seeding

A third factor in successful wheat growing is the time of seeding. On land of low fertility, wheat should be seeded earlier than where the soil is well supplied with plant food. Under any condition, wheat should be seeded early enough to become thoroly established before the ground begins to freeze. More loss is caused by late seeding in the Eastern States than by the Hessian fly. The use of the proper kind of fertilizers will make later seeding perfectly safe from the fly or the severity of the winter.

Varieties

A fourth factor is the choice of variety. Very often personal prejudices have greater weight in this matter than scientific facts. The results of testing varieties of wheat at the Delaware Station covering a period of twelve years and including more than 100 varieties have shown that the bearded wheats as a group have outyielded the smooth varieties by 3.3 bushels per acre.

In many cases the varieties were grown on fertilized and on unfertilized land the same season. It was noted that the bearded sorts seemed to be less affected by unfavorable soil and climatic conditions than the smooth. Where the fertility and season were favorable, little or no difference was noted in the yield. This season showed to good advantage, the relative resistance of the bearded and the smooth wheats to the diseases which were so widespread. As the wheat was being cut reports came in to the effect that the smooth wheats were badly injured. The writer made a trip over the state and collected samples of heads from some 60 farms. The object was to get a sample of bearded and of smooth wheats grown on the same field on the same farm if possible.

The result was astonishing. In practically every case, the bearded wheats had a sound, plump grain as compared with the smooth variety grain under the same conditions. In many cases it took two kernels of the smooth wheats to weigh as much as one from the bearded. On one estate, where 500 acres were in wheat, the entire acreage except about 30 acres was seeded to a smooth variety. The thirty acres of bearded wheat yielded 25 bushels per acre while the smooth averaged 14 bushels. In this case the owner lost several thousand dollars due to variety alone. Some fields were examined which were seeded to smooth wheat but had a slight mixture of a bearded sort. The smooth heads produced nothing but shriveled grain while the bearded gave normally plump kernels.

The resistance of bearded varieties of wheat to unfavorable seasonal conditions this year is in direct line with the results secured at the Delaware Station for a number of years. With a good season and proper fertilization, the smooth wheats give an excellent yield but even then rarely surpass the bearded sorts. In the fertilizer tests discussed, herein each plot was seeded to two varieties of wheat, one bearded and the other smooth.

Of the bearded wheats, such varieties as Red Wonder, Redy, Miracle, Eclipse and Mediterranean have given excellent results. The most desirable varieties of smooth wheats as tested at the Delaware Station are Leap's Prolific, Currell's Prolific and Poole.

With the proper attention to soil preparation, fertilization, time of seeding and variety, it is not difficult to get a uniformly good yield of wheat each year.

MISGUIDED HUMANITY

The need and real value of a humane society is unquestioned, but we are often at a loss to know the use of the present organization known by that name. It does many things that might better be left undone and where a real need exists the society seems to be blissfully ignorant. By way of illustration, the efforts of these people are always prominent in the protection of dogs. They are sure to strongly oppose any law calculated to save sheep from the ravages of wandering dogs, altho one dog can and often does ruin a big flock of sheep. Why has the Humane Society no consideration for the hundreds of frightened, torn, mangled and killed sheep and lambs? Is it truly humane to save one dog at a sacrifice of many sheep?

To illustrate once more; my neighbor, a good and humane farmer, purchased a carload of hogs in Alabama and brought them here for sale. Cholera is practically unknown in Alabama. The purchaser had his car equipped with long feeding troughs running the entire length of the car on each side, kept them clean, and was very particular to provide a safe and comfortable transit for his property. But in Chicago the Humane Society decreed that the hogs must be unloaded and fed in the stockyards. The owner objected because it would mean a delay of three or four days to leave the train here and, in the meantime, the opportunity was fine for picking up cholera. But his objection was useless, the stop was made, and eventually he lost thru cholera 38 out of the 45 hogs kept for himself (I haven't heard from the ones they sold).

Would it not have been far more humane to let him protect those hogs as he intended to do? Why cannot America be blessed with a society capable of mixing enough common sense with its "humanity" to become truly humane?—E. A., New York.

The Corn in that Crib is as Safe as Money in the Bank.

"LAST year I raised a bumper crop of corn, stored it in a wooden crib and then lost many bushels of it and much of my profit through the destructive work of rats and mice. When my crib was almost empty, I found the floor literally covered almost ankle deep with corn which the rats had shelled for me, and which was worthless for my stock."

GUARANTEED SATISFACTION SECURO FARM EQUIPMENT

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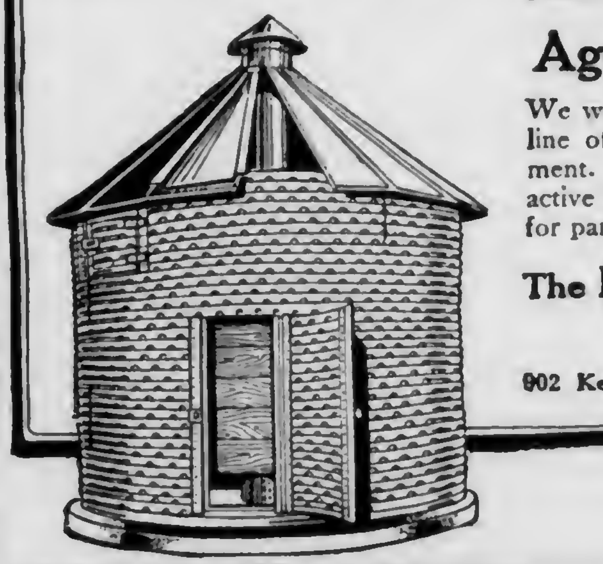

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KEZIAH COFFIN

By JOSEPH C. LINCOLN

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CHAPTER I

In Which Keziah Hears Two Proposals and the Beginning of a Third

Trumet in a fog; a fog blown in during the night by the wind from the wide Atlantic. So wet and heavy that one might taste the salt in it. So thick that houses along the main road were but dim shapes behind its gray drapery and only the gates and fences of the front yards were plainly in evidence to the passers-by. The beach plum and bayberry bushes on the dunes were spangled with beady drops. The pole on Cannon Hill, where the beacon was hoisted when the packet from Boston dropped anchor in the bay, was shiny and slippery. The new weathervane, a gilded whale, presented to the "Regular" church by Captain Zebedee Mayo, retired whaler, swam in a sea of cloud. The lichened eaves of the little "Come-Outer" chapel dripped at sedate intervals. The brick walk leading to the door of Captain Elkanah Daniels' fine residence held undignified puddles in its hollows. And, thru the damp stillness, the muttered growl of the surf, three miles away at the foot of the sandy bluffs by the lighthouse, sounded ominously.

Directly opposite Captain Elkanah's front gate, on the other side of the main road, stood the little story-and-a-half house, also the captain's property, which for fourteen years had been tenanted by Mrs. Keziah Coffin and her brother, Solomon Hall, the shoemaker. But Solomon had, the month before, given up his fight with debt and illness and was sleeping quietly in Trumet's most populous center, the graveyard. And Keziah, left alone, had decided that the rent and living expenses were more than her precarious earnings as a seamstress would warrant, and, having bargained with the furniture dealer in Wellmouth for the sale of her household effects, was now busy getting them ready for the morrow, when the dealer's wagon was to call. She was going to Boston, where a distant and condescending rich relative had interested himself to the extent of finding her a place as sewing woman in a large tailoring establishment.

The fog hung like a wet blanket over the house and its small yard, where a few venerable pear trees, too conservative in their old age to venture a bud even tho it was almost May, stood bare and forlorn. The day was dismal. The dismantled dining room, its tables and chairs pushed into a corner, and its faded ingrain floor, was dismal, likewise. Considering all things, one might have expected Keziah herself to be even more dismal. But, to all outward appearances, she was not. A large portion of her thirty-nine years of life had been passed under a wet blanket so to speak, and she had not permitted the depressing covering to shut out more sunshine than was absolutely necessary. "If you can't get cream, you might as well learn to love your sasser of skim milk," said practical Keziah.

She was on her knees, her calico dress sleeves, patched and darned, but absolutely clean, rolled back, uncovering a pair of plump, strong arms, a saucer of tacks before her, and a tack hammer with a claw head in her hand. She was taking up the carpet. Grace Van Horne, Captain Eben Hammond's ward, who had called to see if there was anything she might do to help, was removing towels, tablecloths, and the like from drawers in a tall "high-boy," folding them and placing them in an old and battered trunk. The pair had been discussing the subject which all Trumet had discussed for three weeks, namely, the "calling" to the pastorate of the "Regular" church of the Rev. John Ellery, the young divinity student, who was to take the place of old Parson Langley, minister in the parish for over thirty years. Discussion in the village had now reached a critical point, for the Reverend John was expected by almost any coach. In those days, the days of the late fifties, the railroad down the Cape extended only as far as Sandwich; passengers made the rest of their journey by stage. Many came direct from the city by the packet, the little schooner, but Mr. Ellery had written that he should probably come on the coach.

"They say he's very nice-looking," remarked Miss Van Horne soberly, but with a mischievous glance under her dark lashes at Keziah. The lady addressed paused long enough to transfer several tacks from the floor to the saucer, and then made answer.

"Humph!" she observed "A good many years ago I saw a theater show up to Boston. Don't be shocked; those circumstances we hear so much tell of—the kind you can't control—have kept me from goin' to théatres much, even if I wanted to. But I did see this entertainment, and a fool one 'twas, too, all singin' instead of talkin'—op'ra, I believe they called it. Well, as I started to say, one of the leadin' folks in it was the Old Harry himself, and he was pretty good-lookin'."

Grace laughed, even tho she had been somewhat shocked.

"Why, Aunt Keziah!" she exclaimed—those who knew Kezish Coffin best usually called her aunt, tho real nephews and nieces she had none. "What do you mean by comparing the—the person you just mentioned with a minister!"

"Oh, I wasn't comparin' 'em; I'll leave that for you Come-Outers to do. Drat this carpet! Seem's if I never saw such long tacks; I do believe whoever put 'em down drove 'em clean thru the center of the earth and let the Chinymen clinch 'em on t'other side. I haul up a chunk of the cellar floor with every one. Ah, hum!" with a sigh, "I cal'late they ain't any more anxious to leave home than I am. But, far's the minister's concerned, didn't I hear of your Uncle Eben sayin' in prayer meetin' only a fortni't or so ago that all hands who wa'n't Come-Outers were own children to Satan? Mr. Ellary must taken after his father some. Surprisin', ain't it, what a family the old critter's got."

The girl laughed again. For one brought up, since her seventh year, in the strictest of Come-Outer families, she laughed a good deal. Many Come-Outers considered it wicked to laugh. Yet Grace did it, and hers was a laugh pleasant to hear and distinctly pleasant to see. It made her prettier than ever, a fact which, if she was aware of it, should have been an additional preventive, for to be pretty smacks of vanity Perhaps she wasn't aware of it.

"What do you think Uncle Eben would say if he heard that?" she asked.

"Say I took after my father, too, I presume likely. Does your uncle know you come here to see me so often? And call me 'aunt" and all that?"

"Of course he does. Aunt Keziah, you mustn't think Uncle Eben doesn't see the good in people simply because they don't believe as he does. he's as sweet and kind as—"

"Who? Eben Hammond? Land sakes, child, don't I know it? Cap'n Eben's the salt of the earth. I'm a Regular and always have been, but I'd be glad if my own society was seasoned with a few like him. 'Twould taste better to me of a Sunday." She paused, and then added quizzically: "What d'you s'pose Cap'n Elkanah and the rest of our parish committee would say if they heard that?"

"Goodness knows! Still, I'm glad to hear you say it. And uncle says you are as good a woman as ever lived. He thinks you're misled, of course, but that some day you'll see the error of your ways."

"Humph! I'll have to hurry up if I want to see 'em without spectacles. See my errors! Land sakes! much as I can do to see the heads of these tacks. Takin' up carpets is as hard a test of a body's eyesight as 'tis of their religion."

Her companion put down the tablecloth she was folding and looked earnestly at the other woman. To an undiscerning eye the latter would have looked much as she always did—plump and matronly, with brown hair drawn back from the forehead and parted in the middle; keen brown eyes with a humorous twinkle in them—this was the Keziah Coffin the later generation of Trumet knew so well.

But Grace Van Horne, who called her aunt and came to see her so frequently, while her brother was alive and during the month following his death, could see the changes which the month had wrought. She saw the little wrinkles about the eyes and the lines of care about the mouth, the tired look of the whole plucky, workaday New England figure. She shook her head.

"Religion!" she repeated. "I do believe, Aunt Keziah, that you've got the very best religion of anybody I know. I don't care if you don't belong to our church. When I see how patient you've been and how cheerful through all your troubles, it—"

Mrs. Coffin waved the hammer deprecatingly. "There! there!" she interrupted. "I guess it's a good thing I'm goin' away. Here's you and I praisin' up each other's beliefs, just as if that wasn't a crime here in Trumet. Sometimes when I see how the two societies in this little one-horse place row with each other, I declare if it doesn't look as if they'd crossed out the first word of 'Love your neighbor' and wrote in 'Fight,' instead. Yet I'm a pretty good Regular, too, and when it comes to whoopin' and carryin' on like the Come-Outers, I— Well! well! never mind; don't begin to bristle up. I won't say another word about religion. Let's pick the new minister to pieces. Any kind of a Christian can do that."

But the new minister was destined to remain undissected that morning, in that house at least. Grace was serious now and she voiced the matter which had been uppermost in her mind since she left home.

"Aunt Keziah," she said, "why do you go away? What makes you? Is it absolutely necessary?"

"Why do I go? Why, for the same reason that the feller that was hove overboard left the ship—'cause I can't stay. You've got to have vittles and clothes, even in Trumet, and a place to put your head in nights. Long's Sol was alive and could do his cobblin' we managed to get along somehow. What I could earn sewin' helped, and we lived simple. But when he was taken down and died, the doctor's bills and the undertaker's used up what little money I had put by, and the sewin' alone wouldn't keep a healthy canary in bird seed. Dear land knows I hate to leave the old house I've lived in for fourteen years and the town I was born in, but I've got to, for all I see. Thank mercy, I can pay Cap'n Elkanah his last month's rent and go with a clear conscience. I won't owe anybody, that's a comfort, and nobody will owe me; though I could stand that, I guess," she added, prying at the carpet edge.

"I don't care!" The girl's dark eyes flashed indignantly. "I think it's too bad of Cap'n Elkanah to turn you out when—"

"Don't talk that way. He ain't turnin' me out. He ain't lettin' houses for his health and he'll need the money to buy his daughter's summer rigs. She ain't had a new dress for a month, pretty near, and here's a young and good-lookin' parson heavin' in sight. Maybe Cap'n Elkanah would think a minister was high-toned enough even for Annabel to marry."

"He's only twenty-three, they say," remarked Grace, a trifle maliciously. "Perhaps she'll adopt him."

Annabel was the only child of Captaintain Elkanah Daniels, who owned the finest house in town. She was the belle of Trumet, and had been for a good many years.

Keziah laughed.

"Well," she said, "anyhow, I've got to go. Maybe I'll like Boston first rate; you can't tell. Or maybe I won't. Ah, hum! 'twouldn't be the first thing I've had to do that I didn't like."

Her friend looked at her.

"Aunt," she said, "I want to make a proposal to you, and you mustn't be cross about it."

"A proposal! Sakes alive! What'll I say? 'This is so sudden!' That's what Becky Ryder, up to the west part of the town, said when Jim Baker, the tin peddler, happened to ask her if she'd ever thought of gettin' married. 'O James! this is so sudden!' says Becky. Jim said afterwards that the suddenest thing about it was the way he cleared out of that house. And he never called there afterwards."

Grace smiled, but quickly grew grave.

"Now, Auntie," she said, "please listen. I'm in earnest. It seems to me that you might do quite well at dressmaking here in town, if you had a little—well, ready money to help you at the start. I've got a few hundred dollars in the bank, presents from uncle, and my father's insurance money. I should love to lend it

to you, and I know uncle would—"

Mrs. Coffin interrupted her.

"Cat's foot!" she exclaimed. "I hope I haven't got where I need to borrow money yet a while. Thank you just as much, deary, but long's I've got two hands and a mouth, I'll make the two keep t'other reasonably full, I wouldn't wonder. No, I shan't think of it, so don't say another word. No."

The negative was so decided that Grace was silenced. Her disappointment showed in her face, however, and Keziah hastened to change the subject.

"How do you know," she observed, "but what my goin' to Boston may be the best thing that ever happened to me? You can't tell. No use despairin'. Annabel ain't given up hope yet. Why should I? Hey? Ain't that somebody comin'?"

"Why, it's Kyan Pepper!" she exclaimed. "He must be coming to see you, Aunt Keziah. And he's got on his very best Sunday clothes. Gracious! I must be going. I didn't know you expected callers."

Keziah dropped the tack hammer and stood up.

"Kyan!" she repeated. "What in the world is that old idiot comin' here for? To talk about the minister, I s'pose. How on earth did Laviny ever come to let him out alone?"

Mr. Pepper, Mr. Abishai Pepper, locally called "Kyan" (Cayenne) Pepper because of his red hair and thin red side whiskers, was one of Trumet's "characters," and in his case the character was weak. He was born in the village and, when a youngster, had, like every other boy of good family in the community, cherished ambitions for a seafaring life. His sister, Lavinia, ten years older than he, who, after the death of their parents, had undertaken the job of "bringing up" her brother, did not sympathize with these ambitions. Consequently, when Kyan ran away she followed him to Boston, stalked aboard the vessel where he had shipped, and collared him, literally and figuratively. One of the mates venturing to offer objection, Lavinia turned upon him and gave him a piece of her mind, to the immense delight of the crew and the loungers on the wharf. Then she returned with the vagrant to Trumet. Old Captain Higgins, who skippered the packet in those days, swore that Lavinia never stopped lecturing her brother from the time they left Boston until they dropped anchor behind the breakwater.

"I give you my word that 'twas pretty nigh a stark calm, but there was such a steady stream of language pourin' out of the Pepper stateroom that the draught kept the sails filled all the way home," asserted Captain Higgins.

That was Kyan's sole venture, so far as sailoring was concerned, but he ran away again when he was twenty-five. This time he returned of his own accord, bringing a wife with him, one Evelyn Gott, of Ostable. Evelyn could talk a bit herself, and her first interview with Lavinia ended with the latter's leaving the house in a rage, swearing never to set foot in it again. This oath she broke the day of her sister-in-law's funeral. Then she appeared, after the ceremony, her baggage on the wagon with her. The bereaved one, who was sitting on the front stoop of his dwelling with, so people say, a most resigned expression on his meek countenance, looked up and saw her.

"My land! Laviny," he exclaimed, turning pale. "Where'd you come from?"

"Never mind where I come from," observed his sister promptly. "You just be thankful I've come. If ever a body needed some one to take care of 'em, it's you. You can tote my things right in," she added, turning to her grinning driver, "and you, 'Bishy, go right in with 'em. The idea of your settin' outside takin' it easy when your poor wife ain't been buried more'n an hour!"

"But — but — Laviny," protested poor Kyan, speaking the truth unwittingly, "I couldn't take it easy afore she was buried, could I?"

"Go right in," was the answer. "March!"

Abishai marched, and had marched under his sister's orders ever since. She kept house for him, and did it well, but her one fear was that some female might again capture him, and she watched him with an eagle eye. He was the town assessor and tax collector, but when he visited dwellings containing single women or widows, Lavinia always accompanied him, "to help him in his figgerin'," she said.

Consequently, when he appeared, unchaperoned, on the walk leading to the side door of the Coffin homestead, Keziah and her friend were surprised.

"He's dressed to kill," whispered Grace, at the window. "Even his tall hat; and in this fog! I do believe he's coming courting, Aunt Keziah."

"Humph!" was the ungracious answer. "He's come to say good-by, I s'pose, and to find out where I'm goin' and how much pay I'm goin' to get and if my rent's settled, and a few other little things that ain't any of his business. Laviny put him up to it, you see. She'll be along pretty quick. Well, I'll fix him so he won't talk much. He can help us take down that stovepipe. I said 'twas a job for a man, and a half one's better than none— Why, how d'ye do, 'Bishy? Come right in. Pretty thick outside, isn't it?"

Mr. Pepper entered diffidently.

"Er—er—how d'ye do, Keziah?" he stammered. "I thought I'd just run in a minute and—"

"Yes, yes. Glad to see you. Take off your hat. My sakes! it's pretty wet. How did Laviny come to let you— I mean how'd you come to wear a beaver such a mornin's this?"

Kyan removed the silk hat and inspected its limp grandeur ruefully.

"I—I—" he began. "Well, the fact is, I come out by myself. You see, Laviny's gone up to Sarah B.'s to talk church doin's. I—I—well, I kind of wanted to speak with you about somethin', Keziah, so— Oh! I didn't see you, Gracie. Good mornin'."

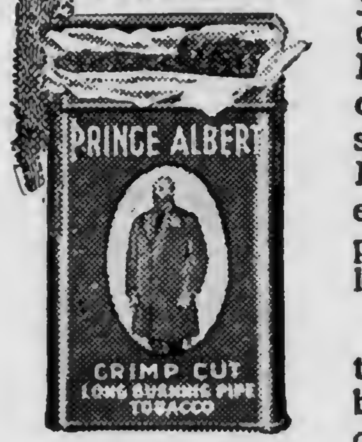
He didn't seem overjoyed to see Miss Van Horne, as it was. In fact, he reddened perceptibly and backed toward the door. The girl, her eyes twinkling, took up her jacket and hat.

"Oh! I'm not going to stop, Mr. Pepper," she said. "I was only helping Aunt Keziah a little, that's all. I must run on now."

"Run on—nonsense!" declared Keziah decisively. "You're goin' to stay right here and help us get that stovepipe down. And 'Bishy'll help, too. Won't you, 'Bish?"

The stovepipe was attached to the "air-tight" in the dining room. It—the pipe—rose perpendicularly for a few feet and then extended horizontally, over the high-boy, until it entered the wall. Kyan looked at it and then at his "Sunday clothes."

(Continued next week)



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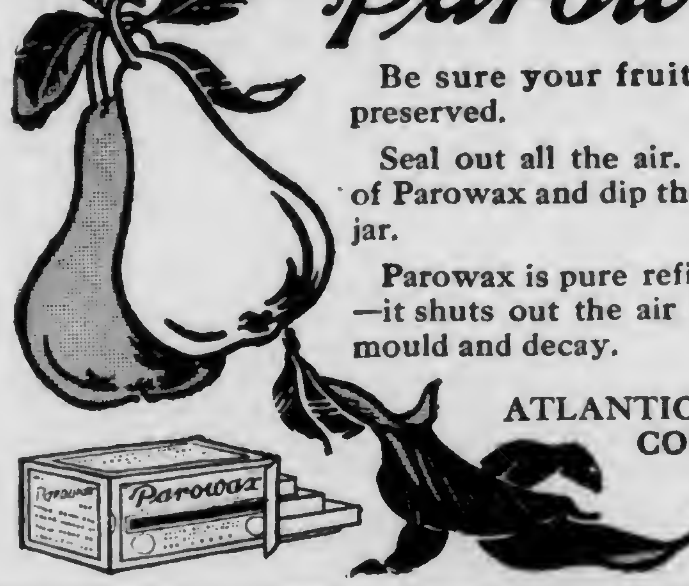

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Wool Growers And Buyers

Whenever the farmers' co-operative marketing movement attains any degree of success the local dealers begin to take notice. This is true of the co-operative wool sales in New York state.

In one Western New York county the sales committee of the co-operative sheep growers' association advertised for bids on the wool clip of the members. The local dealers as well as some of the largest woolen mills and wool merchants in the Eastern states were invited to make bids. Six different buyers, representing large wool houses made bids, and one of these was accepted. None of the local buyers put in a bid. These gentlemen, of whom there are several in the county, set in motion schemes to discredit the sale, and thereby disrupt the association.

The agent of one local buyer called on the vice-president of the farmers' association and offered him a price for his wool clip several cents a pound above the accepted bid. The farmer refused to sell and asked the buyer why he did not put in a bid for the entire clip of the association. He replied that his firm did not care to treat with the association and that they were going to break up the farmers' organization before another spring.

While there was not over one cent a pound rise in the wool market during the time, according to government reports, the local dealers boosted the price ten cents in two weeks. The highest price the dealers offered before the bid was accepted was 50 cents a pound. Immediately afterwards the members of the association were offered 58 to 60 cents a pound. Then the information was given out thruout the county that one of the association's sale committee had sold his wool to a local dealer. It was also reported that several prominent members of the association had refused to stand by their agreement, and sold their wool outside the organization. These reports were soon run down and found to be untrue, but not before they had caused considerable trouble to the association.

The dealers then began to point out what in their own opinion, at least, were serious discriminations against the growers in the association's method of wool grading. The president of the association, however, came back at them with this statement which every farmer who has ever sold wool knows to be true:

"It is only by selling his wool on grade that the good wool grower can get any encouragement for producing a good article; heretofore good and bad went in for about the same price. This condition has demoralized the practice of producing good wool and has given the wools of this section a poor reputation in the market. Under a system of grading good wool brings the best money and growers are encouraged to put a better article on the market.

"The sales committee did its best to guard the interests of the association members. Until last year the wool growers of the county never had an opportunity of selling their wool on the open market; heretofore it has been a case of taking what was offered. This year six of the largest Eastern buyers competed for their wool. Moreover the wool has been sold on its merits, the good wool bringing the top money. It was weighed at the loading point by a farmer, something that has never happened before. And any man who was dissatisfied had the privilege of taking his wool elsewhere for sale. Every farmer knew ten days in advance of loading just what the different grades would bring.

"It cost the wool growers of the association $170 in dues to the organization to market 40,000 pounds of wool. They received an average of 57 cents a pound, or seven cents above what the price would have been if the association had not introduced competition into the wool market of the county."

It is said that similar schemes have been used by local dealers in other counties to break up the wool growers' association and thereby put an end to collective selling. But the farmers are not misled by these tactics. With few exceptions they are standing firmly by their co-operative wool selling associations. Another season will find the sheep raisers more effectively organized than at present. The local buyers in New York state will either have to get in line with the growers' wool-selling associations, or deal in other products, the growers of which are not so well organized as are the sheep men.—E. E. R.

WOOL-POOLING A SUCCESS

This spring the farmers of Lawrence County, Pennsylvania, organized the Lawrence County Sheep and Wool Growers' Association for the purpose of marketing their wool co-operatively and on its own merits.

The wool was delivered to a warehouse in New Castle by the growers and stored until an expert grader could be secured. July 21st and 22nd the wool was graded into ten grades. The wool was immediately offered for sale under the plan of sealed bids and sold to the highest bidder. In this manner 31,165 pounds were marketed and the average price per pound received was 69¼ cents. The "Fine Delaine" brought 76 cents; ½-Blood Combing 72 cents; ⅜-Blood Combing, 68 cents; ¼-Blood Combing, 66 cents; Clothing, 66 cents and Rejections, 58 cents.

The Association believes that hundreds of dollars more were received for the wool than would have been paid had there not been an Association. Not only were members of the Association benefited by this organization, but also those who did not pool their wool, because the keen competition betwen the organization and the dealers caused the latter to pay a good price, if they were to get any wool. The Association considers this undertaking a big success and the experience gained this year will enable them to market their wool to still better advantage next year.—Norman C. Dale, County Agent, Lawrence Co., Pa.

Veterinary

Conducted by W. C. Fair, V. S.

Advice thru this department is free to our subscribers. Each communication should state history and symptoms of the case in full; also the name and address of writer. Initials only will be published. We cannot make reply by mail. This is one of the most valuable columns of the paper and we invite readers to make use of it. Clippings from this column, when properly preserved and classified, make one of the most valuable medical symposiums a farmer-stockman can obtain.

Sore Back.—One of my work horses has for some time been troubled with sore back. What had I better apply? H. A. H., Meadville, Pa.—I take it that this is rather a malignant trouble and the fungous tissue should be cut off. If you will use a clean sharp knife or razor it will not cause him much pain. Then apply equal parts powdered alum, oxide of zinc and tannic acid, three times a day and his back will heal. Kindly understand, if his back was made sore on account of his wearing a badly fitting saddle, either change saddle or leave it off entirely.

Bruised Stifle.—I recently purchased a 10-year-old mare. The owner pointed out a stifle injury, caused by bruise, but joint seems to work all right. I applied mild blister, with a view of taking out soreness if there was any. I also blistered hip, which was some sweenied. What line of treatment do you recommend? J. B., Reynoldsville, Pa.—Mix equal parts turpentine, aqua ammonia and raw linseed oil, shake well and apply to stifle and sweenied portion of hip every day or two. Moderate work will do her no harm.

Indigestion.—Stringy Milk.—Have a cow, four years old, that is not thriving; besides her milk soon becomes stringy. When milked I fail to notice anything wrong with it, but when separated it is some stringy. So far as I can tell the cow is not sick, but she does not do well. H. S., Canton, Pa.—First of all, be very thoro in the cleaning of your separator, keep milking utensils very clean, see that the hands of milker are also clean; furthermore, the cow stable should be cleaned and kept clean, if you hope to produce clean milk that will keep. Giving your cow drugs will not correct the trouble.

Tuberculosis.—For the past six months I have occasionally lost a chicken. The first symptom is dullness, followed by a gradual loss of flesh and strength, then the bird dies. J. H. M., Jamestown, N. Y.—In your letter you mention finding the liver covered with diseased spots, this leads me to suspect it a case of tuberculosis. If so, the disease is incurable. When another bird commences to droop and show similar symptoms, you had better destroy it. Clean and disinfect your hen house and yards. Are you sure that your cows and hogs are free from tuberculosis? Feeding chickens on milk from cows that suffer from generalized tuberculosis may infect them, besides the excrement of either cattle or pigs may be infected, therefore you had better try to ascertain the cause of your poultry ailment.

Stifle Lameness.—I am breaking a colt that is troubled with weak stifle. She shows lameness when starting and after traveling about a mile she is practically all over it. The joint swells and I notice the hock joint is also filled with a puffy swelling. The puff in hock is cold and we believe the whole trouble is in stifle joint. H. M. H., Canton, Pa.—Clip off hair and apply equal parts turpentine, aqua ammonia and raw linseed oil to stifle every evening and she will perhaps recover.

Collar Gall.—We have a work horse troubled with sore shoulder, but a few days' rest and home remedies seem to heal it. A. J. M., Oil City, Pa.—Be sure that the collar fits the neck and shoulder; most of them do not. Dissolve ¼ lb. acetate of lead and ¼ lb. tannic acid in one gallon of water, shake and apply to sore shoulder, 4 or 5 times a day.

Congested Udder.—One of our cows is occasionally troubled with inflamed bag, but even if I do nothing for her she seems to get well in two or three days. H. J. K., Batavia, N. Y.—Apply one part fluid extract of poke and 15 parts of witchhazel to congested portion of udder, three times a day. If her bowels are costive, give one dose of epsom salts.

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PENNSYLVANIA FARMER

AGRICULTURE THE KEYSTONE OF NATIONAL PROSPERITY

ESTABLISHED 1880 — PUBLISHED WEEKLY

Volume 46 PHILADELPHIA, PA., SATURDAY SEPTEMEER 13, 1919. Number 11

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AGRICULTURE THE KEYSTONE OF NATIONAL PROSPERITY
ESTABLISHED 1880 PUBLISHED WEEKLY

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Cooperative Marketing Farm Products

Some 13,000 Farmers' Organizations Do a Billion-and-a-Half Dollar Business Annually

By O. B. JESNESS

Bureau of Markets, U. S. Dept. of Agriculture

The farmers of today have come to appreciate the value of cooperative action in the solution of problems affecting both the production and marketing of their products. The best answer to the question "Can farmers cooperate?" is that they not only can but that they are cooperating. True, the oftrepeated statement "Farmers will not stick together," has not been entirely forgotten, but this expression is becoming less frequent. Some people are still holding up the disastrous experiences encountered by many cooperative enterprises undertaken during the seventies, when the Grange first had such a rapid development, as warnings against the formation of cooperative enterprises.

There were many failures among the activities started by the farmers during that period as the development was very rapid and enterprises were established on insecure foundations. Enthusiasm also led to the starting of activities which were inadvisable. The ardor for cooperative endeavors was soon dampened by these setbacks.

As there were failures during the early days of the Grange, there have been failures since, and we must expect that there always will be some failures in cooperative ventures as well as in other business enterprises. We should not shut our eyes to the experiences of unsuccessful cooperative associations, but we should study them in order to avoid repeating the same mistakes. However, as Mark Twain said, "One should not get more out of an experience than there is in it." Past failures should make us proceed with care but should not keep us from proceeding where conditions are favorable.

Some time over a year ago the Bureau of Markets, U. S. Department of Agriculture, published Bulletin No. 547, "Cooperative Purchasing and Marketing Organizations among Farmers in the United States." This bulletin shows that 5,424 organizations reporting transact over $625,000,000 worth of business yearly. The Bureau of Markets has the names of about 8,000 additional organizations, some of which have reported since and others concerning which no information has been received. It is believed that the total volume of business transacted by these organizations is at least one and one-half billion dollars yearly. While not all of them are purely cooperative, they are farmers' enterprises. This demonstrates very clearly that farmers can cooperate in selling their products and buying farm supplies.

Examples of Organized Marketing

Probably the most conspicuous example of a successful producers' cooperative marketing enterprise in the United States is the California Fruit Growers' Exchange. This is a non-stock, nonprofit, cooperative association engaged in the marketing of citrus fruits. Over 8,000 growers are members of local associations which form district exchanges, which in turn are united in the central exchange. According to the report of the general manager for the year ending August 31, 1918, the Exchange handled over 25,000 cars of fruit during the year. The returns for this fruit exceeded $36,000,000.

Another large marketing organization is found among the farmers in the Virginia part of the peninsula between the Chesapeake Bay and the Atlantic Ocean. This organization, known as the Eastern Shore of Virginia Produce Exchange, handles Irish and sweet potatoes and other products. Its annual volume of business amounts to several million dollars.

Large City Wholesale and Retail District For Sale of Farm Products

A number of cheese producers' associations in Wisconsin have formed the Sheboygan County Cheese Producers' Federation. The Ozark Fruit Growers' Association has been developed in southern Missouri and northern Arkansas to market such products as peaches and strawberries. Citrus fruit growers in Florida have a marketing association known as the Florida Citrus Exchange. Potato growers in Michigan have formed a number of local associations and have established the Michigan Potato Growers' Exchange as a central selling agency.

These are merely a few examples of how farmers have organized for cooperative marketing. There are several thousand farmers' creameries and cheese factories in the United States. Market milk producers have organizations for collective bargaining. Farmers' grain elevator companies are found in several thousand localities. Fruit and vegetable growers in many places have cooperative marketing machinery. Live stock shipping associations are increasing rapidly. Cotton and tobacco growers have undertaken cooperative marketing to a certain extent. Farmers have united in many cases for the cooperative purchase of feeds, fertilizers and other farm supplies, and there are some cooperative stores.

Purpose of Cooperative Marketing

What may be accomplished thru organized marketing? The individual producer frequently finds that there are certain things necessary in improving marketing methods which he can not do himself, acting as an individual. Thru organized effort, however, many of these things may be carried out with success.

Grades and Standards.—The individual grower is not qualified to grade and inspect his own products. Even tho he does grade his products carefully, he does not produce enough to gain very much recognition. A cooperative marketing association can insure the uniform grading of the products of all the members and the volume of business will be sufficient to attract favorable attention. Careful inspection is necessary for enforcing a grading system, and here again cooperation is of service by making the employment of competent, disinterested inspectors possible.

The value and importance of careful grading and inspection has been demonstrated by many cooperative associations. Thus, the California Fruit Growers' Exchange, thru careful inspection and grading, has developed a reputation for the fruit of its members which has been a decided asset in facilitating its sale. Cooperative associations have exerted a valuable influence along standardization lines in other ways. Greater uniformity of varieties grown in a community can be effected thru cooperative action, and many marketing associations have been of service in this way.

Cooperative Advertising.—The advertising of certain products in order to facilitate and extend their sale is frequently advisable. An individual can not accomplish very much along this line because of his limited production. A large organization, however, can devote a considerable sum for advertising purposes and still the charge per unit of product will be very small on accocunt of the volume of business over which the cost is distributed. Numerous examples of the value of cooperation in advertising can be cited.

Market Information.—The average producer lacks both the time and the facilities for keeping in constant touch with market demands and conditions. He is therefore at a disadvantage because he frequently has to deal with persons who are well informed along these lines. The volume of business available in a cooperative marketing enterprise makes it possible to secure the services of qualified persons to keep informed as to these questions. An individual producer, moreover, is at a disadvantage in making use of the information along this line because he does not know what the other producers in the community are going to do. A cooperative organization, with control over the business of the community, is in a much better position to take the proper action.

Specialized Selling.—Successful manufacturing establishments always devote a great deal of attention to the sales department. They recognize that efficiency in production alone is not sufficient, but that marketing also must be efficiently done. A cooperative marketing association, when properly organized and operated, is in reality the community's sales department for the product which it handles. An organization can devote the necessary attention to the development of old and extension of new markets so that the best results may be obtained.

Other Activities.—Marketing associations can be of service in other ways. Storage facilities have been provided in connection with many marketing associations. Improved transportation service and lower rates have resulted from the activities of some cooperative associations. Farm supplies are purchased thru many of the cooperative selling organizations. The service to the community in the cultivation and development of a better spirit of cooperation is also worthy of consideration.

First Cutting of Alfalfa Seeded With Oats on N. J. Rohrer's Farm, Lancaster County, Pa.

When and Where to Organize

Cooperative marketing has great possibilities but it is a mistake to look upon cooperation as a remedy for all our difficulties. Cooperation has been defined as "working together for mutual benefit." As this definition signifies, success depends upon the proper working together of the members. The farmers should feel the need for cooperative marketing before an organization is undertaken, because under those circumstances they will be more likely to give the organization the required support than when they do not feel a need for such a venture. The most successful marketing organizations are those which have sprung from necessity. The attitude of the farmers in the community must be favorable toward cooperative enterprises. They must be willing to supply their share of the necessary capital, to turn over their products to the association and to support it loyally at all times.

Ordinarily, a community which specializes on one or a few products offers a better field for an organization than one which grows small amounts of a number of products. Likewise, an organization which handles one product or similar products is less apt to encounter difficulties than one which attempts too many lines of business before it is well established. A sufficient volume of businesss to make the operation of an association worth while should be available before a cooperative marketing organization is undertaken. Some communities have met with failure because of overlooking this fact.

A careful study of the local situation is of value when a cooperative marketing association is being considered. This study should bring out all the facts of importance in deciding whether or not an organization is advisable.

Showing the Appearance of Alfalfa Field at Harvest Time on Mr. Rohrer's Farm

How to Organize

Leadership is necessary in forming a cooperative organization. Interested persons in the community must assume this work in order to get the producers together. Meetings should be called for the purpose of discussing the question fully and to ascertain whether conditions are ripe for the formation of an association. Committees should be selected to draw up plans of organization and to stimulate interest in the enterprise.

The committee engaged in preparing the plans and bylaws will find helpful suggestions in many publications of the U. S. Department of Agriculture, (U. S. Department of Agriculture Bulletin No. 541, "Cooperative Organization Bylaws" contains a suggested set of bylaws), State institutions, in farm papers and from other sources. These suggestions, of course, should be adapted to the particular needs of the community. The plans prepared by this committee should be carefully considered at a meeting where opportunity is given for a full and free discussion of all points.

Incorporation.—Incorporation is usually advisable for cooperative marketing associations because of the definite legal standing gained thereby. Information in regard to how to incorporate may be obtained from the Secretary of State or other official in charge of such work, or from a local attorney. Many states have special laws providing for the incorporation of cooperative associations and wherever possible it is usually advisable to incorporate under such a law because a more strictly cooperative form of organization is permitted.

Basic Principles

Cooperative organizations differ from general business corporations formed for profit. In the latter, each share of stock has a vote and the profits are distributed in the form of dividends on capital stock. Cooperative organizations, however, are democratic institutions in which it is customary to allow each member only one vote. Capital invested is granted only a fair rate of interest and any further surplus to be divided is prorated in accordance with patronage, in recognition of the fact that the patronage has created this surplus.

Profits v. Savings.—A distinction may be made between "profits" and "savings." An ordinary business establishment engaged in buying and selling is in business to make profits, that is, to make money on the investment. A cooperative marketing organization, on the other hand, should act as an agent for its members in selling their products. A certain charge is made for the services rendered, and if it is found that the business has been carried on for less, the difference constitutes a saving and these savings are refunded in accordance with the business furnished. Farmers' marketing organizations should have for their purpose, the making of savings, not profits. Speculative practices of course are out of place in cooperative enterprises.

Form of Organization.—Cooperative associations may be formed with capital stock, or they may be non-stock. Many of the states have not provided for the incorporation of non-stock associations up to the present time. The non-stock, non-profit form is gaining rapidly in favor and more of the states are providing for the incorporation of such cooperative associations. The form of organization adopted, of course, must be in harmony with the provisions of the law under which incorporation is to be effected.

Business Principles.—A cooperative marketing association is a business enterprise and must be conducted along business lines if it is going to be successful. Marketing associations are rapidly coming to appreciate the importance of having a strong form of organization in which the member is bound by a definite contract to market his products thru the organization. Many an organization has been wrecked because of failure to observe this important requirement. Many of our successful cooperative marketing enterprises owe much of their success to an observance of this and other business principles.

The Manager.—One of the essentials for success in any business enterprise is good management. Unfortunately, many cooperative enterprises have not grasped the real importance of securing a good manager. He should be selected with extreme care. His qualifications for the place should be the most important consideration. Relationship and friendship have no place in deciding upon a manager. It is also well to remember that the man who will accept the smallest salary is frequently not the cheapest man to employ. After an efficient and capable manager has been selected, he must be given the necessary authority and support to enable him to work out his plans to the best advantage.

Cooperation of Members.—The management alone can not make the organization a success. The individual member must do his part. Lack of loyalty and interest on the part of the members and patrons is perhaps the most common cause for failure among cooperative enterprises. Just as our nation depends upon the loyalty of its citizens, so a cooperative institution depends upon the loyal support of its members. Unless the individual member does his part, results can not be secured. The members of a cooperative institution should never lose sight of this fact.

IS FARMING ON A PAYING BASIS?

Are the editors speaking advisedly, I wonder, when they say editorially that farming is now on a paying basis and that it would be wise to admit the fact, etc.? Just what constitutes a paying basis? I have been supposing, previously, that any business that is really in that condition is able to run at least at its normal capacity and, if it is paying very well, to expand its operation if such a course seems desirable. Should it not be able to pay a wage sufficient to attract at least as much help as it formerly employed? Are the American farms generally in this condition? If they are, then surely western New York furnishes no reliable basis by which to judge the nation.

We live one and one-half miles south of the most prosperous general country store I know of. It draws trade over a radius of at least ten or twelve miles; people come to it from, and beyond, good-sized villages. We are also 4½ miles south of the original Chautauqua Assembly; yet, between us and our store are four vacant farm houses and only seven occupied ones and, even this, is a better showing than is made on our other surrounding roads. Not so many years ago these houses were all filled. If farming is truly profitable why is it not supporting as large a population as it did when the total population

was much less than at present? Personally, I should be glad to have more people come, since it is much pleasanter to have no vacant houses.

Surely, farmers have some more money to spend than formerly; if they did not they would be obliged to return to the days of spinning and weaving or do like the "poor benighted Hindoo, who, having no clothes, had to make his skindo."

Some years ago many farmers in this section always kept hired men, but today only a few keep any and these few have only one or two. Practically every one is reducing the farm operations to a point where the farm owner and his family can do the work alone. Does this indicate great prosperity? The fertilizer question illustrates the point well, too. The big majority of farmers buy as much fertilizer as they dare run in debt for (which is, invariably, less than they need) and pay for it after harvest time because they can't get hold of the money in the spring, tho it could be bought appreciably cheaper thru the grange purchasing agency for cash.

Right here is one of the chief obstacles to the success of the individual farmer. A thing we want or need becomes scarce or high priced so we learn to produce it ourselves. We find that we can produce a particularly good article and the thot occurs to us, why not produce it for market? But a little investigation discloses the fact that, however, good our product and however friendly our local dealers may be, they dare not buy from us unless we can assure them a permanent and sufficient supply and even then it is hazardous because the big concerns producing these things will no longer sell to retailers who buy direct from the little fellow. Is farming on a truly paying basis and will it ever be until agriculture organizes as solidly as Big Business is now organized? When it is, our empty houses will be filled and our abandoned farms will be once more producing crops and the farm lad will cease to hunt a job in the city.—E. M. A., Chautauqua Co., N. Y.

Rat-Proof, Storm-Proof and Fire-Proof Granaries of Sheet Steel

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SEEDING THE WINTER WHEAT CROP

Factors That Help to Determine the Yield of the Crop

The 1919 winter wheat crop is harvested and rapidly finding its way to the mills and elevators, while the seeding for next year has been started. The crop just harvested passed all records as far as the acreage was considered, yet, the yield was not up to the yearly average, while the quality of the grain was far below normal. Whether the next crop will be a repetition of this year's, is best not to prophesy, but for the good of the American farmer and pubic in general, it is well to guard against such an occurence happening again.

Various were the causes that brought about this condition, yet, the most prominent ones were: unfavorable weather, insect and fungus diseases, late seeding, and lack of fertility. Yet, nearly all of these can be traced directly or indirectly to the fact that the patriotic farmer attempted to seed more acreage than he was able. Instead of concentrating on the usual acreage, he distributed his energies over too large a scope; the effect being that the soil was not properly prepared, the seed was not recleaned or treated as it should have been, while not enough fertility was suppplied—thru either manure or the commercial article—to give the young plants sufficient start and vitality to withstand the poor conditions that existed later.

In preparing for the 1920 crop the farmer should not attempt to seed more than his usual acreage but should put it out well. Where wheat follows oats, the soil should be well plowed, as early as possible and then thoroly worked until all of the volunteer oats that comes up is killed. A great mistake that many of us make is in not harrowing enough, the oats still remains to smother out the young wheat, and the final result is that the crop at harvest time is thin.

However good the seed may be it will not make a satisfactory crop if it is stunted at the very start, for lack of proper nurishment; and if there is a place where fertilizer shows to good advantage it is on the wheat crop. Top-dressing the wheat in the fall with re-inforced manure gives good results, altho, top-dressing in the winter will make nearly as large a yield and in addition will benefit the clover much more. Where plenty of barnyard manure cannot be secured, it certainly pays to use commercial fertilizer, and you can readily pick out those who do not believe in its use. Where late seeding is used in an attempt to overcome the Hessian fly, it is always advisable to fertilize rather heavily with a quickly soluble fertilizer so that the young plants get sufficient growth to withstand the winter.

Another condition that contributed vastly to this year's poor wheat crop was in the grade of seed used. Instead of using the best obtainable, many farmers, sowed it just as it came from the thresher, regardless of whether it was from disease or weed-infested fields. This year these same farmers' fields were noticeably subject to fungus attacks and other diseases, as well as being literally filled with weeds. On one field, in this locality, seed of such poor quality was used that the yield was not more than one-half of a crop; about half of the stand was made up of rye, cockle and cheat, while the wheat plants were nearly covered with smut and rust.

Possibly, some of the fungus diseases that attacked the wheat this year were due to the unfavorable weather that prevailed during late May and early June; yet, in many cases the spores or germs were carried over from the year before on the seed that was used, while the unfavorable conditions only gave them a better chance to develop. If there has ever been a time when it paid to select good seed, it will be this fall; with the contamination that our wheat has had this season, next year's prospect will not be very bright, unless the seed is selected from as nearly rust-proof fields as possible and then treated for the smut. The treating of oats for smut has been quite common, and the time is surely here when the need for treating the wheat is just as great. Dr. Hunt states: "The smut spores adhering to the grain germinate and enter the young wheat plant thru the sheath of the first leaf. The fungus grows within the wheat plant without external manifestation until the plant is about to flower, when the whole spike except the rachis is reduced to a mass of black smut spores." From this we can readily see that the spores can be destroyed if the seed is properly disinfected before seeding. The method most commonly used and recommended for this purpose is the same as used for treating oats, namely, sprinkling (or otherwise covering) the seed with a solution of one pound of formalin (40 percent solution of formaldehyde) to 50 gallons of water.

With the world's demand for bread-stuff exceeding the supply, wheat prices will continue to rise and will maintain a high level for several years to come, in spite of all the regulations and federal H. C. L. investigations. In the future, the American farmer should not attempt to break these prices by flooding the market with a large amount of inferior grain from an abnormal acreage. By good preparation of the soil, heavy fertilization, selection of good seed, the recleaning and then treating it thoroly for the smut, he will be able to produce the best, and his returns will be more than they were from this year's record-breaking yield of low-grade wheat.—C. Randolph Kahler, Lycoming County, Pa.

STORIES IN FARM LAW

When An Heir Under a Will Owes the Estate

Early in 1911 farmer John Brown lent his son Henry $3,500 on a promissory note payable six months after date with interest at 7 percent, as the son was going to a neighboring city to become a partner in a mercantile concern, and Brown had always promised "to give him a lift" whenever he went into business.

The mercantile concern was not a success, and Henry never paid the note, or any part thereof; in fact, as it was "all in the family," as he expressed it, he did not make the slightest effort to pay it. Then in 1918 John Brown made his will appointing Arthur Post his executor, and leaving the farm to his older son James, and $6,000 to Henry.

Brown died early in 1919, and then Henry demanded his $6,000 legacy.

"The money is ready and waiting for you," Post explained, "and I'll be glad to hand it over, first of course deducting the $3,500 note and interest which you owe the estate."

"I never gave that note a thought from the time I signed until today," Henry remarked airily.

"You'll give it thought enough now, and your legacy will be $3,500 less at any rate," Post assured him.

On general principles, Post, the executor, was perfectly right, and was amply justified in the stand which he took, as the universal rule in the United States is that where a deceased person leaves a legacy to a certain party, and that party is indebted to the estate, then the executor is legally justified in deducting from the legacy the indebtedness to the estate, merely paying over the balance.

In the above instance, however, an exceedingly interesting point arose, as Henry positively refused to have his note deducted from the amount of the legacy, and threatened to sue the estate for the full amount.

"But, as executor of the estate, I have a perfect right to deduct from the legacy of any legatee under the will the amount of that legatee's indebtedness to the estate," protested Post.

"I may not be as green as I look, and I have had legal advice on this point," declared Henry, "and, while you are perfectly right on general principles, you can't apply the rule in my case, and you've got to fork over the full amount without any reduction whatever."

"How do you make that out?"

"Simply because that note has been due over six years, and I've never paid a cent of principal or interest on it so the note is outlawed and is absolutely uncollectabe at law," declared Henry.

"That's right," admitted Post.

"So that if Dad were living and sued me on the note he couldn't collect it for the simple reason that it is outlawed," Henry went on, "and if he couldn't collect it what right have you to set it up against me and collect it in full, which is what you actually do when you keep it out of my legacy."

"I must admit there is something in what you say," Post admitted, "and as the point is entirely new to me I will have to see what our attorney says before I can come to any decision."

Pennsylvania Courts hold that the legatee is entitled to the benefit of the statute of limitations and can collect his legacy in full without deducting the outlawed debt.—A. B. Brown.

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Our job is to serve our readers. Whenever and wherever we can help you, write us.—The Editors.

Boost The Schools

NOW that the war is over parents should plan to give undivided attention to the schools of their neighborhood. There was a legitimate excuse for the lowered condition of educational institutions during the past three years, and some things will yet interfere with achieving ideal conditions, but for these reasons parents and school officials should bend every energy to make up for lost time as far as possible. Nothing is so much needed in most rural communities as a united and active interest. Make the teachers and pupils understand that you are interested in them, and don't withhold intelligent, constructive criticism. It is so easy to drop into the habit of indifference if not harmful fault-finding. The public school almost invariably reflects the educational standards of the community.

Improve The Fairs

IS THE almost universal demand for light amusement and entertainment likely to allow the more serious and useful features of agricultural fairs to be crowded out by the frivolus? There have been signs for some time that even farm people were attracted more by the "amusements," silly and cheap as many of them are, than by the real things that make it worth while to hold a fair. In fact, it was a noticeable fact at a fair held in the capitol city of one of the nearby states last year that the majority of the visitors in the horticultural and stock buildings were city people. They were interested in the source of their food, while unattracted by the noisy, vaudeville performances. Fair managers too often bid for large crowds by procuring spectacular tho worthless features for entertainment, and this is carried so far in some instances that the original purpose is lost sight of and an opportunity for presenting useful and interesting information is turned into a burlesque upon the name of agriculture.

A good agricultural fair is a splendid opportunity for education to all classes and offers one of the best means of advertising farm products. It is an old-time institution and one that will be perpetuated, but farmers should see that it is not allowed to degenerate into a useless if not harmful affair.

Break in Hog Prices

THE break of $3 to $4.50 per hundred pounds in the price of hogs on the Chicago market last week can be traced directly to the present agitation of the high cost of living. Market analysts point out that the break, coming as it did without foundation in market conditions, was equally unprofitable for stock raisers, the packers and the public. The stockmen are certain to lose money if they sell at the reduced prices, because of the high prices of feed going into their finished hogs. The packers will lose on the stocks on hand if retail prices make a corresponding break at this time. The public learns of the power prices in the wholesale trade, and failing to find a corresponding cut in retail prices are further disappointed and further inclined to boycotts which merely aggravate a temporary condition. The present loss to stock raisers and the packers avails no permanent return to the public but will increase the shortage of needed supplies for the future. The condition is typical of what may be expected in practically all lines of food products if the present propaganda for lower prices without regard to maintenance of price levels is continued The farmer suffers first, but the ultimate damage must be shared by all.

Draft Lessons

NO such complete and extensive examination into the mental, moral and physical condition of the people of the United States was ever made before as was made during the assembling of the army raised one and two years ago, hence the findings are worth the serious consideration of the people. They are all the more valuable because they were made by competent and impartial physicians. Disappointing as are the results we must conclude that the figures showing imperfections would be still larger if like examinations were made of the entire population, since the draft called young men at the ages when we might expect to find them at their best.

Almost 30 percent of the two and a half million young men examined were rejected for some physical defeit. The greatest single imperfection was flat feet. About 15 percent were rejected on account of nervous and mental troubles, and 10 percent because of two communicable disease groupes—tuberculosis and severe cases of venereal diseases. One surprising fact brought out was that there is about one-fifth more venereal disease in the country than exists in the cities. In this classification, "rural districts" includes the towns as well as the countryside. On the other hand, the number of rejections for alcoholism and drug effects was much larger in cities than in the country.

Will the public take the lessons of the draft to heart and try to improve its homelife and its institutions so as to lessen this great proportion of human derelicts and incompetents as well as the number of those handicapped by troubles which might be prevented or remedied by wise training? Of course, many of those rejected are in every way fully competent to do their full share in civil life and are neither a burden nor a menace to society, but the number of young men who are both of these is discouragingly large.

Save The Fruit

THE demand for no product has increased so much during the past few years as the demand for fruits. Unheardof prices have been paid for berries, bush fruits and tree fruits and the indications are that the demand will continue, altho it may be expected that prices will decline somewhat along with the expected general reduction. It will pay to save all peaches, apples, quinces, etc., in some way, as it will all be needed before another crop is raised.

Three causes may be given for the unprecedented demand: First, crops of nearly every kind of fruit are short this year—in many cases far below the normal; second, people were better able to buy, since the generally higher wages made it possible for a large class, which had hitherto done with little, to buy plentifully; third, the semi-prohibition due to the war-time act, and the anticipated effect of the prohibitory amendment has greatly increased the demand for fruits and juices, and if the hopes of all but the liquor dealers and confirmed drinkers are realized this situation will continue and the demand increase as people learn the value of fruit and its by-products.

We would call attention to the suggestions made by Dr. Stewart in this week's issue. Only fruit of first class quality and properly graded should be sent to market for sale in its natural state. During times of plenty of money the public demands the best and refuses to buy second and third grade stuff, especially fruit. These latter grades had much better be made into cider, jelly, preserves, etc., for it is possible to make a first class line of by-products out of second and third rate fruit and it will sell at a first class price.

It is well to remember that a revenue tax must be paid by all people, including farmers, when juices of any kind are sold for beverage purposes. Many farmers discovered this last year when they were called upon to pay a tax upon cider sold for beverage purposes. This applies to unfermented juices, as, of course, it is wholly unlawful to sell any kind of liquids containing alcohol without a license, even in "wet" times.

Railway Legislation

ALMOST every class of people has expressed its opinion about the question of railroad ownership and control in the form of a bill and surely out of this mass of opinion Congress should be able to evolve a bill that will be safe, sane, and just. They have before them bills prepared by the railroad employees, appropriating to themselves the plums of profit and management; then there is the bill in the interest of the security holders which provides first for interest rates and fat dividends regardless of other things; in addition we have a bill expressing the views and wants of the managers, and lastly, the Cummins' bill which seems to meet the views of the masses better than any of the others. Senator Cummins is accredited with knowing more about railroads and the economic questions connected with than than any other man in Congress. The bill which he has prepared leaves the ownership of the roads in the hands of private capital, but provides for full and complete government regulation by a Board of Transportation. Labor is to share in the management thru directors elected by the employees to represent them. The Board of Transportation is to be composed of five members appointed by the President, and are to receive $12,000 per year, each. The development of railroad transportation has been one of the biggest and at the same time most perplexing problems of the past century, and now that a great emergency has made it possible to reorganize them, let it be done with fairness to all concerned.

Unwarranted Land Values

WHILE there seems to be little indication as yet of serious inflation of land values here in the East, reports from the Middle West bring stories of prices paid for farms that are simply startling and indicate a condition of pure speculation. The market value of many farms in that section have doubled and even trebled in the last three years. It is said that in some instances farms have changed hands several times within the last few months, each new owner unloading upon the next at a considerable advance until the price has reached as much as $500 per acre.

It goes without saying that any such prices paid for land for straight farming purposes is bound to spell disaster in the end. The high prices paid for farms on the strength of the high prices of farm products at the close of the civil war broke many a well-intentioned but unwise farmer. Altho many of the economic factors of the present time differ from those of 50 years ago when over-expansion of cultivated areas soon brought farm products to ruinous prices, we must not forget that we are having a period of inflation now and that the general price level will be lowered. We have also before us the soldiers' land reclamation scheme which, if carried thru, will greatly extend the cultivated land area as well as add several hundred millions to the money to be raised by some form of taxation.

Straightout speculation in farm land is no more justifiable than is speculation in the products of the land, for in the end the public pays for it in high prices and in the losses caused by deflation. The only fair gauge of the value of farm land is its net production value. In arriving at this the estimate must be made from the figures of a spread of years and with the full realization of the uncertainties of the future. Neither the farm owners who desire to continue farming, nor the public which draws its living from the land are one whit the better off because of the unwarranted rise in the price of farm lands and some means should be devised to prevent the periodic recurrence of this form of speculation.

HARRISBURG LETTER

Market Surveys.—Study of the facilities for handling of farm produce in markets in the cities and large towns of Pennsylvania is to be undertaken on an extensive scale by the State Department of Agriculture immediately. The State Welfare Commission, various state departments and municipal governments have been asked to extend such assistance as will be possible in determining whether the means of placing the produce before the householder are adequate and just what is the matter. This survey of the markets is something which has been in the mind of Secretary of Agriculture Rasmussen for some time and it is believed from a cursory inspection that some things of value in the distribution proposition may turn up. Towns which are close to a rich farming district like Lebanon, Reading, Lancaster and West Chester, those which are less favorably situated like Altoona, Beaver, Greensburg and Uniontown, some in specialized districts like Erie, Scranton and Wilkes-Barre, and the two large cities will be studied. The results will be compiled and things can be corrected. Just as an instance of the way this study works out it may be stated that the State Bureau of markets chief, G. W .Smith, and the chairman of the Dauphin County Food administration, Donald McCormick, called a meeting of farmers in Harrisburg markets and found that one reason why more produce was not brought in was the uncertainty of sale. Steps were taken without delay to get commission men, hotel buyers and others handling large quantities to meet farmers and a wholesale produce market to be attended by farmers and entirely separate from the retail markets and curb markets will be established.

NEW YORK LETTER

Milk Notes.—In a survey of 35 milk routes of New York City it was found that from 4 to 10 milk wagons delivered to the same blocks; that the producer gets only 40 percent of the price the consumer pays for milk; and that 60 percent is paid for its care and distribution after the farmer delivers it in the outer New York zone. It is perfectly clear that if there was but one wagon to the block of homes the distributions of milk would be more economical. Of the fair price milk committee of nine members to be appointed, the Governor has appointed as his three Sophie Irene Loeb, a writer on a daily paper, the district attorney of the Bronx and a man who has assisted in delivering milk to the poor. Just previous to her appointment to the position, Miss Loeb gave her solution of the retail milk price by saying that the farmers do not send their milk to the city, but that "a large part of it is made up into by-products, and that this practice must be stopped." With this as a sample of the judgment of this commission, and with the certainty that Mayor Hylan will appoint three members who are dyed-in-the-wool Tammany men, the name of the fair price committee, so far as the farmer is concerned, is a misnomer. It is estimated that the Hearst publications of that city are damaging dairying interests to the value of $1,000 a day, by misrepresenting the farmers side of the milk situation. The business men of Auburn have raised the $10,000 capital needed to make complete the funds necessary to establish the new farmers' milk plant in that city.

Cheese Notes.—It was thought last week that the cheese market had reached its lowest point at 28 cents. This week, Gouverneur and Watertown dairy boards secured a half-cent raise, tho sales were smaller than last year.

Successfully Tractor Show.—The sales of tractors made at the recent state tractor show at Potsdam proved it to be one of the most successful yet held by the department of farms and markets.

Land Army Activities.—There were more farmeret camps asked for this year than could be supplied, 45 being furnished in the state with demands for 100. Calls are coming in for camps next year, and the army has been more successful this year than last. Lack of funds and secretaries for recruiting work have limited the amount of work done by the camps this year.

Calf Club.—At the Lewis County fair 28 calves, the finest lot ever assembled together in the county, were secured from leading Holstein breeders, and placed with boys and girls, who will care for them a year, to see who can develop them most successfully.

Smaller Notes of Interest.—Honey is scarce this year and bee diseases increasing rapidly, was the verdict of the Cayuga County Bee-keepers' annual meeting, attended by 75 bee-keepers of three counties. The need of closer organization of bee-keepers was urged and heartily approved by the hearers. Next year this county will hold ten demonstrations of bee diseases. Several flocks of sheep were damaged by dogs in Newark Valley one night recently. Appraisers allowed $15 each for sheep, $10 for a lamb and $2 each for those chased and worried.

NEW JERSEY NOTES

Reclamation of New Jersey Meadows.—Believing that the reclamation of 20,000 acres of land embraced in the Great Piece Meadows, which extend over sections of Morris, Essex and Passaic Counties in the northern part of the State, would mean an increased production of $10,000,000 worth of foodstuffs yearly, Governor William N. Runyon visited about 100 representative farmers gathered at central points in this vast tract of land expressly to learn their views on the possibility of reclamation. The farmers in that part of New Jersey where the meadows are located have organized, and in Morris County where the loss by a flood during the past summer is said to have been $200,000, the board of agriculture composed of the farmers have started a movement for the introduction at the next session of the Legislature, measures which will enable them to improve the mammoth piece of land for produce raising.

Teaching Farming at High School.—A four-year course in agriculture has been opened in the high school at Hopewell, as a part of the curriculum in that institution for 1919-1920. The course is being conducted by E. V. Bearer, who was an instructor in the Summer School operated at State College, Pa., this year. The course is of a vocational character, and will fit the students for entrance into any agricultural college. The course consists of farm management and shop work.

Farmers Urged to Prepare For 1920.—After having visited 13 counties in the State within the past month and having noted conditions prevailing there, Prof. L. A. Clinton, Director of Extension, urged farmers not to become discouraged even if their 1919 crops have been a failure, but to get the soil ready for another planting and prepare for 1920. He said that in his travels he did not find one farmer who was the least bit discouraged in his work in spite of all of the discouraging things that happened during the summer to destroy the crops, and that this was the kind of spirit to be shown by all of the Jersey agriculturists.

Early Peaches Bring Fair Prices.—Reports received at the Mercer County Farm Bureau show that most of the early variety of peaches are now on the market and that they are bringing prices slightly lower than those which prevailed at this time last year. The leading orchards were said to be producing fair crops of fruit. The Albertas from this section have been placed on the market. Some damage was done by storm during the week to the later crop in this vicinity and this will result in slightly reducing the crop. The quality of the fruit from those orchards which have received attention and where the trees have been well sprayed is held to be far superior to these from other orchards which have not had good attention. There are between 80 and 100 farmers in Mercer County growing potatoes for seed next year. The crop that is now being harvested is being found to be slightly below normal because of the great amount of rain during the summer.

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350 head of registered Holsteins.

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Third Annual Consignment Sale
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Blair County (Pa.) Breeders' Association
Wednesday, October 8, 1919, at 10 A. M.
125 Head of Purebred Holstein Cattle
consisting of 60 fresh cows, 50 heifers and 15 bulls. This is a choice lot of cattle. A number of A. R. O. cows up to 30 lbs.

Sale will be held at the Fair Grounds, near Altoona. Sale will be held under roof. Write for catalog.

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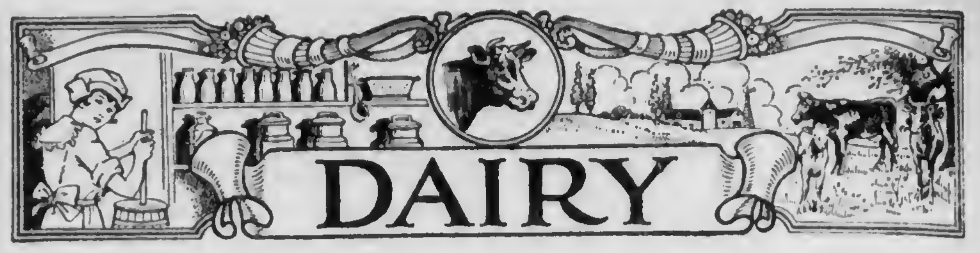
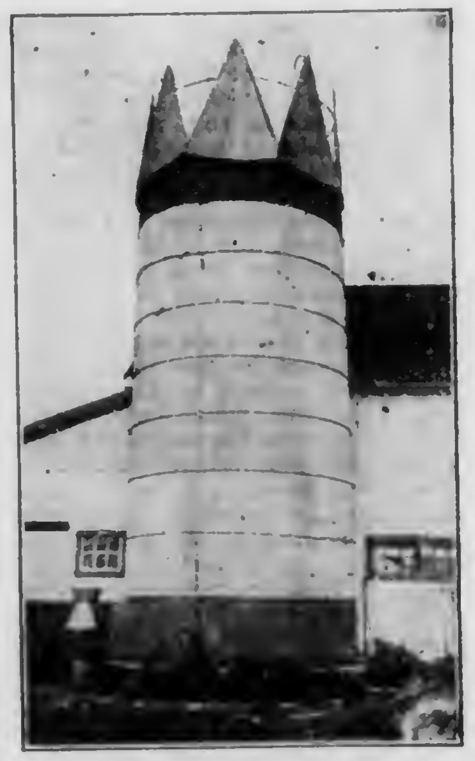


DAIRY

In The New York Milk Field

We are fortunate this month in having early word from League headquarters on the price of milk for the month. The communication stated that the price is to be $3.21 for 3 percent milk at 200 miles from New York. On the following Monday the daily paper gave us the same information. This is much better news service than we have had during the summer. The daily paper also stated that this price is an average of 8.8 cents a quart to the farmer. How they got that is a mystery. They must have figured a very high test, or more likely they took some fellow's guess and didn't figure at all. If milk tests, as has been stated for the up-state regions generally, 3.6 percent. the price, delivered at the station, is almost exactly seven cents. This year at all the stations that I have heard from tests are given the farmers considerably lower that in any previous year. It almost looks like a concerted action by the buyers. If the test runs at 3.5 percent, then the price of milk is a little under 7 cents at 200 miles, and at 250, where the greater portion is sold, it is still less.



Adjustable Metal Roof Permits Maximum Filling

The food investigation is to be blamed in part for the comparatively low price. It is doing just what was intended, that is to "whack" the farmers. I doubt if we are getting it any harder than grain farmers, but it is doubtful if the dealers will give us any advantage in the decline of feeds to the grain grower. It is always thus. They hit the producer and the middlemen get the benefit. Consumers may get something out of it in a few cases, but not many. Every effort will be made to carry out Samuel Gompers' theory of raising wages and lowering farm prices of foods. That is a vote getter in some quarters.

The Lane Proposition

Our farmers are a unit in opposition to the Lane appropriation for the development of worthless land. They are saying less about it than one could wish, partly because they are too busy to give it the attention that it deserves as a grafting proposition. It is now proposed to spend about a fifth of this effort in the East in order, as we understand it, to get some votes for the plan from this section of the country. Come to look at it straight, that feature may be the worst of it all. The plan seems to be to buy votes and there is really no assurance that these votes will be paid for as intimated. Should the East get a substantial boost from the proposed appropriation then our lands might sell a bit higher for a time, but those who desire to keep their farms and continue farming might be compelled to sell the products of the farm for less money than otherwise, and might even be forced to sell produce at a loss. The whole proposition is unsound and it is the wasting of money that we object to.

Feed Markets

While feeds are dropping where they are grown, cattle feeds do not decline in our dairy section. Dealers have stocked up considerably and they hold retail prices up to the highest notch, never minding any decline in the general market. This has been the policy of dealers for years and it is the reason that farmers should co-operate and buy feeds in times of lower prices and hold for use in the dairy. This year it is possible that feeds may be cheaper later in the fall than in the usual time earlier in the season. It is doubtful if farmers get much of any future decline should there be one. Possibly if there should be any considerable decline in feed prices over the country we may get some of it.

Better Cattle

There is no doubt but our dairymen are progressive. More purebred cows are added to herds about as fast as they can be procured. Fewer dairymen are using grade sires as the years go by. We are coming to be hopeful that some of our up-state counties will soon use pure-bred sires entirely. In a few counties an effort is being made to encourage the selection of these purebreds from cows that have produced 10,000 or more pounds of milk in a year. More attention is being given to keeping a tested sire as long as he will breed. A 10 or 12-year-old bull is by no means an exception, altho he is not so common as might be. If kept until his daughters give milk and prove their superiority, then keep him longer. If necessary, pass him on to a new herd or make an exchange. Beef is high and sells well, but all good sires ought to be retained longer than has been the custom.—H. H. Lyon.

FILLING THE SILO

Silo filling time is rapidly approaching and it is assured that most farmers have prepared and repaired the necessary machinery. At the same time the cutter should be set to cut the proper length of pieces. Corn should be cut into pieces varying from one-half to one inch in length. Short cutting requires slightly more power, but the corn in this form packs better in the silo, comes out in better condition, and is less wasteful in feeding because stock eat all of it.

If a blower is used, a distributing attachment should be used or a man should be assigned to the job of mixing it in the silo in order that no soft air pockets are formed, which cause spoilage and so the silage may be uniform for feeding. Packing the silage is equally as important as the distribution. The making of good silage depends upon thoro distribution and packing. Put the best men in the silo for this purpose.

It is not uncommon to use water at the time of filling. Corn cut at the proper stage of maturity—the denting or glazing stage—should require no additional water. When the crop has become too dry or has been frosted, water will add to the keeping qualities and palatability of the silage. Some consider the use of water as a means of sealing the silo. More or less silage will decay at the top unless the silo is sealed over or feeding is begun soon after filling. To prevent much of this loss, some farmers seal the silo with three or four loads of green corn from which the ears have been removed; some use other sorts of heavy green crops, while still others use saw dust satisfactorily.

In sections of Ohio it is a common practice to cover the silage with floor sweeping of chaff and grain after threshing. The grain in the chaff starts to grow, makes an excellent cover and excludes the air from the silage. Where threshing has been done this may be found a good practice to adopt, provided the value of the grain in the chaff as a poultry feed is not excessive. In every case it is advisable to soak the covering thoroly with water and tramp it regularly for several days after it has been placed in the silo.—John H. Voorhees, N. Y. College of Agriculture.

NATIONAL DAIRY SHOW

Dairymen who have never attended the National Dairy Show can scarcely comprehend what this great event offers. Here is just a summary:

First, 1,000 of the best dairy cattle in the world, representatives of the five leading breeds. Herd demonstrations. Scrub dams with improved produce.

Second, exhibits of every kind of feed and forage. Milk, butter and cheese in competition from all parts of the country. Every device for the handling of the dairy products.

Third, all of the devices perfected for use in the barns and other buildings of the dairy farm, from milk stools to motor trucks.

Fourth, vast educational exhibit arranged by the United States Department of Agriculture covering the entire industry.

Fifth, demonstrations in the food value of dairy products as shown in child growth and development.

Sixth, conventions and meetings of practically all of the organizations representing different branches of the dairy industry.

Lastly, at the National Dairy Show to be held at Chicago, Ill., October 6 to 12, inclusive, you will see the greatest dairy gathering with a more complete exposition of all phases of dairying than has ever been held before in this or any other country.

The honey bee does not have a very long life, but he keeps busy while he's here.

The Cow Feed that always makes good

You have fed some feeds that absolutely failed to produce the results you expected. You paid a good price for them and they looked good to you but they fell down on results.

The value of your cows ought to make you cut out all experimenting. You can buy a feed that makes good all the time. That feed is

HAPPY COW FEED
(24% PROTEIN)

Happy Cow Feed is composed of cotton seed meal, corn meal, cocoanut meal, wheat bran, shorts, velvet bean feed, unhulled peanut oil feed, alfalfa meal and salt.

Most of these ingredients are grown in the South. They have been the backbone of Southern dairying for years. They are now grown in such quantities that Eastern dairymen can get the benefit of them.

There are six different feeds sold under the "Happy" trade-mark. We are particularly proud of Happy Cow Feed. It never fails to win the full confidence of every dairyman who gives it a trial.

Our mill and our methods are absolutely clean. We produce nothing but feeds. We do not buy produce, or use any cheap, low-grade by-products as fillers.

You can readily understand why we are so much in favor of the new feed bill now before Congress. It is a bill to regulate and classify feeds containing low-grade by-products and refuse.

This new bill is for your protection. It is known as the "Lever Feed Bill." Write to your Congressman and ask him to support it.

Never again need you be disappointed over results in feeding your dairy cows. Feed Happy Cow Feed. Give it a trial. You will be as happy in feeding it as we are in making and selling it to you.

Buy from your feed dealer. If he cannot supply you, send us his name, and also the names of several friends who want a better feed. We will see that you are supplied.

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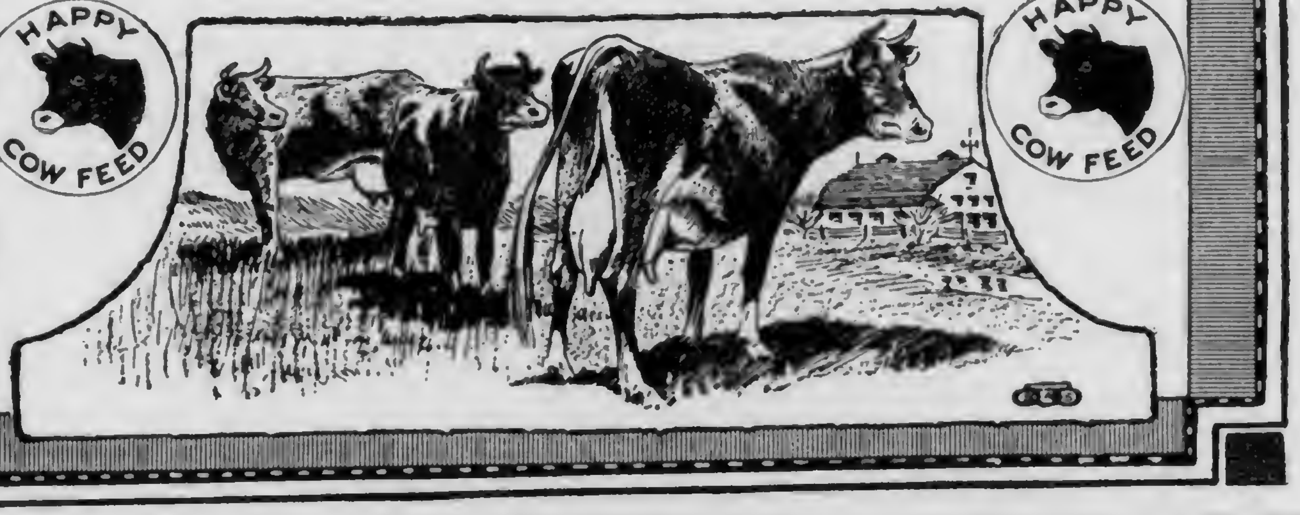

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WIDE SPREAD SPREADER

With Straw Spreading Attachment

With this spreader you can drive through doors and narrow places, as the box is only 38 inches wide, yet you can spread the manure in a wide even sheet.

It is low down, easy to load, strongly constructed, light in draft, and the second beater thoroughly pulverizes the manure, spreading it in a wide, even sheet beyond the wheel tracks. One lever operates the entire spreader.

This spreader can also be equipped with a straw spreading attachment which is illustrated here. It is easily attached and spreads straw in a wide, even sheet, as thinly as you desire, even on windy days.

Straw is worth from $4 to $8 a ton as fertilizer and as a top dressing for winter wheat.

You can make more profit from your manure and straw with this Moline spreader.

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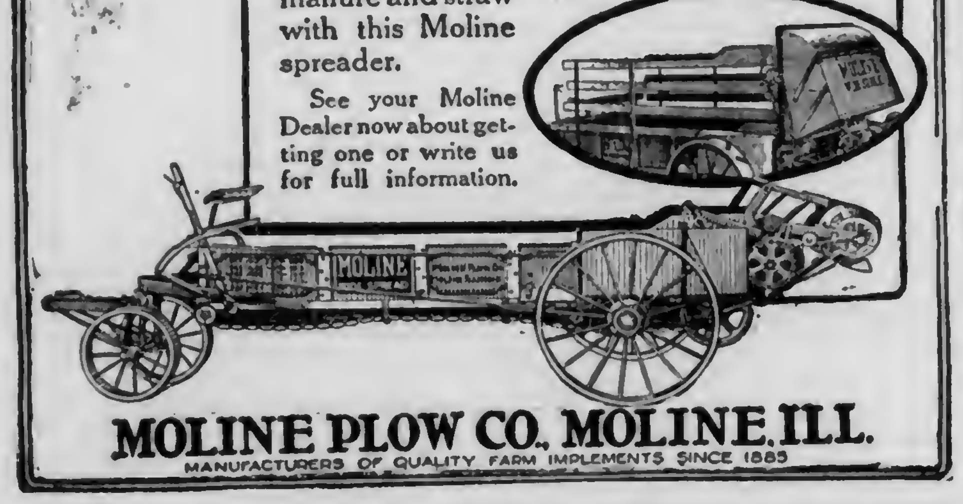

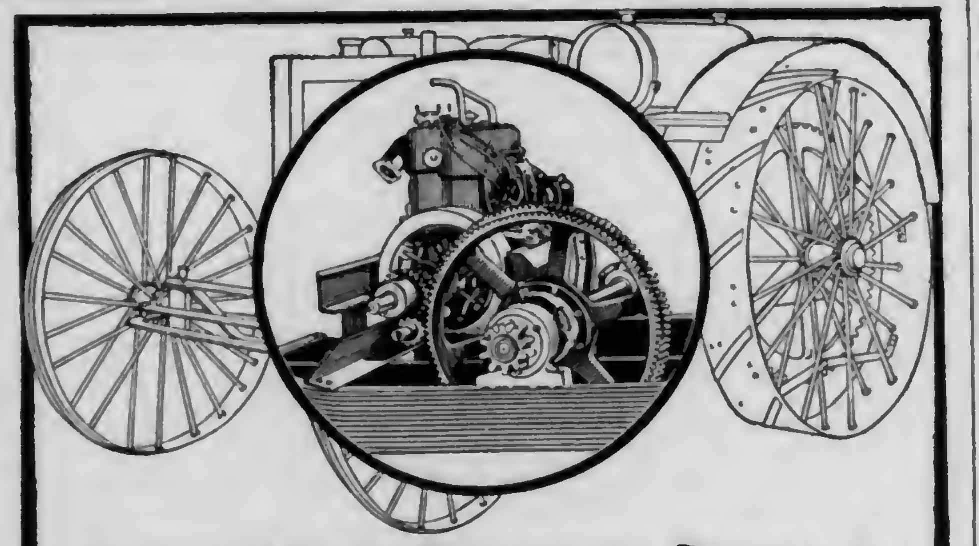

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TRACTOR economy and tractor power depend largely on the proportion of the power developed by the motor that is delivered to the draw-bar.

In simplicity and economy the direct spur gear drive of the Huber Light Four is unequalled. There are no bevel gears—simply a friction clutch and spur gear reduction to the driving wheels.

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These features are the result of 20 years' development. They are behind the Huber reliability that has created thousands of satisfied Huber owners.

Weight 5,000 pounds; pulls three 14" bottom plows; 12 h. p. delivered to the draw-bar; 25 h. p. at the belt; Waukesha four-cylinder motor; Perfex Radiator; Hyatt Roller Bearings; burns gasoline, kerosene or distillate; center draft; two speeds, 2½ and 4 miles per hour.

Write for "The Tractor in the Making". It tells the interesting history of tractor development.

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Canadian Branch, Brandon, Manitoba
Makers also of the famous Huber Junior Thresher.
Some good territory is still available for live dealers.

HORTICULTURE

GETTING READY FOR THE APPLE HARVEST

By J. P. STEWART

By the time this appears the real apple harvesting period will be at hand. By this we mean the picking time of the general fall and winter varieties, of which the first are the Jonathan, Smokehouse and Grimes. At the present time, it looks as if the commercial barrel apple crop of the country is going to be nearly 30 percent, or about 5,000,000 barrels, less than last year, at which time unprecedented prices were reached. The commercial box apple crop, however, is some 44 percent, or about 9,300,000 bushels, greater than last year, so that the net reduction from last year's crop is somewhat less than 2,000,000 barrels. This is evidently a very serious reduction in the total crop, with all of it coming in the normally lower-priced section, so that no one should lose his nerve and let his fruit go this fall until he gets a really satisfactory price.

It also means that all reasonable precautions should be taken to avoid all unnecessary waste in the crop this fall. With apples worth anywhere from six to ten dollars a barrel, it will not require any special urging to induce the growers to exercise special precautions in their harvesting, so far as their knowledge and facilities go. It is along the latter line that a few suggestions may be in order.

In the first place, we believe that it is usually a mistake to attempt to harvest all the fruit from a tree at a single picking. Some of the later varieties or the more lightly loaded trees may be able to stand this practice without much loss in yield or quality, but in most cases if the picking is deferred until practically all the fruit is ready to come, there is great danger of important loss from breakage, storms, and dropping of the most advanced fruit. Without some lightening and shifting in the positions of the limbs, moreover, it often happens that some fruit on the lower portions of the tree would practically never attain the size and color that it should. In general, therefore, we believe that, wherever the acreage and labor supply will permit, at least two pickings should be made this year of all heavily loaded trees, in order to secure the maximum results.

I remember giving advice of this kind to a large and very successful grower in this state several years ago, who had invited me into his orchard to make criticisms and suggestions. I found very little indeed to criticise in that orchard, but when I suggested a divided picking for most of his trees, he apparently rejected the idea at once as totally impracticable. I naturally did not press the matter, and went away with the impression that there would be no change along that particular line. Some time later, however, I was surprised to get a letter from him stating that he had tried out my suggestion and had really been amazed at the increase in size and color, and the general improvement shown by the fruit which was left for the second picking. Fruit that would have ordinarily landed in the cull pile or cider stock, had developed into regular first-grade stock as a result of merely leaving it on the trees until it had had a chance to reach its normal development. The result of that trial had apparently permanently converted him to the policy of more than one picking for practically all well-loaded trees in the apple orchard.

Another important item in securing the maximum results from the present crop is to make provision for immediate packing or for immediate placing of the fruit under suitable cover as fast as picked. It is still not uncommon in some sections to see large piles of fruit left in the orchard with the sun beating down on them for an indefinite period. This is most damaging to the keeping quality. It also brings out all the little bruises and develops the maximum greasiness of the skin, so that the general appearance and actual market value of the fruit are very much reduced. A very important saving could be effected by a general and complete reform in this regard.

There are also many little things which in the aggregate make an important difference in the ultimate results. The right kind of picking vessels, the proper picking and handling of the fruit so as to avoid all unnecessary bumps and leave the stems in the fruit and the fruit-spurs on the trees, are important items in this connection. Of the various types of picking vessels, moreover, I still prefer either a tin pail or a smooth, swing-handled, half-bushel splint basket. For a collecting vessel, there is probably nothing better than the regular apple barrel, altho it may require some special nailing to stand the "racket," in case the same barrels are used repeatedly. Some growers also tack a little cleat inside the upper edge of the barrel and three or four inches below the top, to furnish a better hand-hold, especially in handling the empty barrels.

Great improvements are also possible in the final packing and grading. If the fruit is not properly sized, sorted, marked and packed, the best returns can not be expected. The writer once bought a barrel of rather good Ewalts on a village market for $2, and that was all they were worth as they stood. From this barrel, however, after cleaning and sorting the fruit, we got two boxes of as nice looking fruit as one could find any place, which would have readily sold on the Philadelphia market for $2 each, and had a bushel of fairly good cooking stock left. If the quantity of this fruit had been large enough, it would have paid well to buy it all and regrade and pack it right, and send it to another market. In other words the grower in this case could undoubtedly have doubled the net returns from his fruit by simply improving his methods of packing, and the same will doubtless be true of the out-put of many thousands of growers again this year. It is such cases as this, moreover, which is likely to justify the development of the large, national commercial concerns for producing and marketing fruit, of which we have witnessed the beginning this year.

The Hale Peach

There is probably no variety of peach now on the market which was introduced with as strong recommendations or as great a flourish of trumpets as the J. H. Hale. There is always a reaction after getting people's expectations keyed up so high, and the reaction is upon us in full at the present time. The danger, however, is that the reaction will carry us as far from the truth as the unusual boom did in the first place.

This is the conviction that forced itself upon me as I stood in an excellent young orchard in Maryland recently, in which a very considerable block of Hales were just coming into bearing. From the size, color and general beauty of the fruit on those trees, together with its exceptional firmness and freedom from rot even after attaining practically full color, I could readily see how the originators and introducers could easily go into ecstacies over this peach without any important exaggeration. In fact, the evident conclusion from a comparison of the behavior of the J. H. Hale and the Elberta in this particular orchard up to the present time is that the Hale is distinctly the better peach to plant.

Demand For Grapes Is Increasing

The Elbertas were not doing poorly by any means. In fact they were acting fully up to par at the time of the observation, altho they had been rather slow in getting started. The Elberta trees were also larger and were averaging more fruit to the tree this year. The Hales, on the other hand, were at least a year younger on the average, and in proportion to their size and age were bearing distinctly the more valuable crop.

We realize that the J. H. Hale has proved rather less hardy, both in tree and bud, than the Elberta, and that some good orchardists are reported to have pulled them out on account of relative shyness in bearing. This simply means that not all the best qualities are concentrated in this one variety, and that it is a mistake to expect too much of it. At the same time, I am ready to state that any variety which can turn out such an exhibit as the one which the Hale was showing in that Maryland orchard a few days ago, deserves most careful consideration on the part of anyone expecting to plant peaches. It is certainly a magnificent fruit, and one which at least should be in every home orchard, if not in every commercial planting.

The Winter Banana apple was also showing up well in this orchard. It was bearing earlier than anything else in the apple line, and the Oldenburg, Wealthy, Jonathan and Stayman were in the competition. It is rather subject to blight, however, and requires very careful handling.

Washington, Jefferson and Clay loved the farm and spoke of themselves as farmers.

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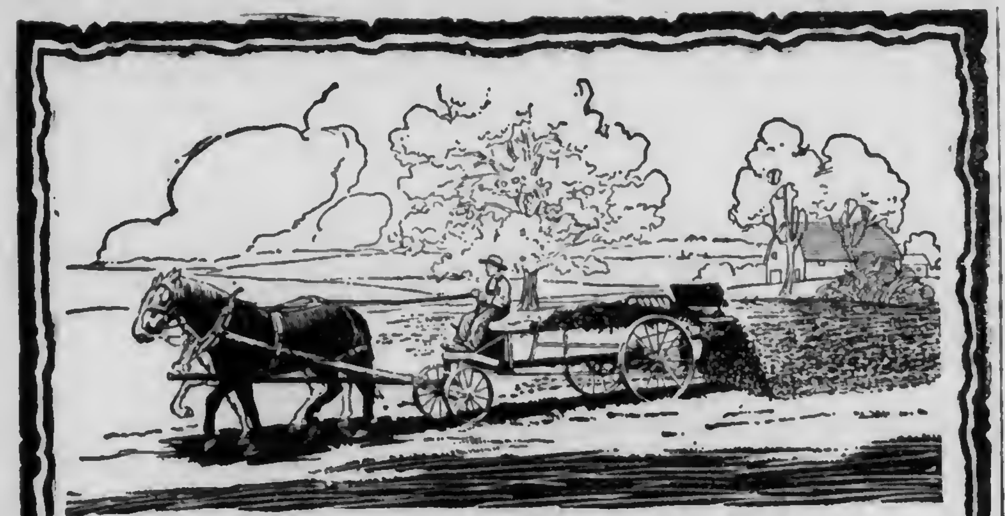

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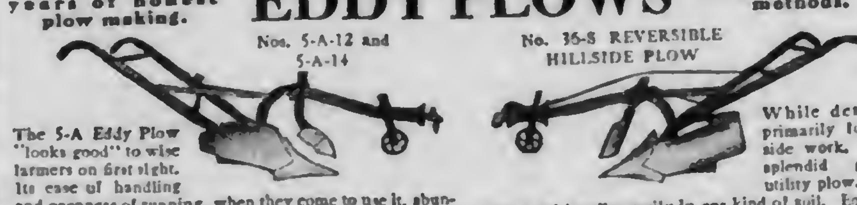
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SALT FOR CABBAGE WORMS

After more than once trying this simple and harmless remedy, I cannot but wonder that the arsenites are so often called into use. Even though there is no danger to the cabbage in using these before the heads form, there is danger to other things, as pet stock. The brine is harmless, always at hand, and it really seems to induce firmer heading. Then it can be used freely after the heads are forming, thus keeping the entire plant free from the pests.

Use a heaping tablespoonful of salt to every two quarts of water, and sprinkle the plants thoroly either with a sprayer, or with the hand. If the worms are well established, do this every day for three days and then gradually diminish to twice a week. After you have gained the day with those at hand, spraying once a week will probably be sufficient for the rest of the season; but unless the white millers which cause the trouble are killed, the salt water will be needed occasionally to keep them down.—Bessie L. Putnam.

SHALL I PLANT AN ORCHARD?

The unusually profitable returns that commercial growers realized from their orchards last year, coupled with the even greater returns that appear to be certain this year, undoubtedly will lead many to consider seriously the advisability of setting an orchard. The writer of this article wishes neither to encourage nor discourage such planting. There is occasion, however, for calling attention to several facts that have been established by experience. The first of these is that fruit growing should be looked upon as a long time business enterprise. In addition to the original investment at the time of starting the orchard there is a six to eight year period during which the grower not only has to wait for returns but when he must add constantly to his original investment thru care devoted to his trees. The fruit grower is fortunate indeed whose orchard at bearing age does not represent an outlay at least twice as great as that represented by cost of land, nursery stock and planting right after it has been planted. In the second place orcharding is an exacting business. Not only year after year, but month after month, the trees need attention in the way of cultivation, spraying borer and rabbit protection, etc. This care must be given them continuously from the time of setting as long as the orchard lasts, if profitable returns are to be expected. Any prospective grower who is unwilling to provide this constant care is to be advised to stay out of the orchard business, for otherwise he is certain to have little but disappointment as a reward for his half-way efforts . Ill-advised planting is expensive for the individual and an injury to the industry.

SMALL FRUIT CROP

The fruit crops thruout the districts visited by the New York State Horticultural society members are generally far below the average. In Niagara county, on the New York side, they traveled thru orchard after orchard that showed not over 25 per cent of an apple or a peach crop. The concensus of opinion among the growers was that Western New York will not have over 25 percent of a normal crop of peaches or apples and that $7 a barrel will probably be the prevailing price for apples, and $5 a bushel the market price for peaches. Both in Western New York and Canada there has been an unusually heavy drop of peaches. The experts are unable to agree upon the cause for this condition. One of the most plausible, however, is that the heavy freeze late in April weakened the productive capacity of the buds, and as a result there is not sufficient vitality remaining to fully develop the fruit.

Over on the Canadian side the prospects are much better for peaches and pears, the early cold rains and the existing drouth have proved unfavorable to these fruits. The leaf curl was unusually severe this spring in Canadian orchards. One Canadian expert says that in early June more than half of the peach orchards between Beamsville and St. Catherines and many orchards in other localities were so badly affected that almost every leaf was distorted, swollen, and turned a brownish color. Most of these trees will not enter winter nearly so healthy nor bear so large a crop next year as if they had not been attacked by leaf curl.

Canadian growers quite generally agree that pears will be 60 percent of a full crop.—E. E. R.

MEETING OF TOMATO GROWERS

At the picnic held on the farm of John E. Patton, near East New Market by the Tomato Growers' Association of Dorchester County, Md., more than 500 persons were present. S. O. Taylor made an address in which he spoke of the 40 local associations with a membership of nearly 2,500 farmers now scattered all over the "Delmarvia Peninsula" while there was but one in 1915 and that at Cambridge. P. M. Bomberger, assistant director of the extension service of Maryland State College, spoke of the causes of failure of co-operative associations. Robert G. Houston of Sussex County, Del. told of the county farm bureau organized in Sussex and their co-operative marketing done on a large scale, that the farm bureau was to the farming interests as a good live board of trade is to the merchants of a city. Mr. Houston spoke enthusiastically of the organization of twelve produce exchanges, totalling 1,700 farmers and 300 boys and girls.—Marylander.

COMMUNITY PACKING HOUSE

The fruit growers of Washington County, Md., have held several important conferences recently with railroad officials. The Western Maryland Railroad on July 15 gave permission for a site on their right of way at Smithsburg to the growers, on which will be built a packing house. This right of way has a six-car track and a space 30 feet by 250 feet. A canvass of the growers of the vicinity was made July 16 and money was subscribed for the packing house for peaches and apples. The building will be erected immediately and a committee is now making plans and selecting materials.

This progressive step will probably be followed by other fruit growers throughout the county, altho there is some opposition by outside interests. These men, however, intend standing by this co-operative movement.—Marylander.

One way to make country life more attractive is to beautify the farm both indoors and out. Flowers and shrubs, pictures, books, magazines and musical instruments all help.

ORIGIN OF FRUIT VARITIES

Many of our choicest varieties of fruits were discovered by accident. The purple raspberry was found in a field by a New York state farmer, altho it is a distinct hybrid, its parents being a black cap and a red raspberry.

The New Honeysweet black raspberry was first found growing by the side of an old building on a Western New York farm. These berries are very sweet and luscious, and can be left on the bushes longer without injury than can those of other varieties, thereby extending the picking season. The propagator says he believes the Honeysweet is a cross of the Plum Farmer and the Gregg, as these varieties were formerly grown in the vicinity of the building. The Plum Farmer black raspberry, which is grown extensively in commercial berry fields all over the country, was discovered by an Ohio fruit grower.

The Erskine Park everbearing red raspberry, which is a true everbearer, out yielding the St. Regis and bearing larger fruit, was discovered on an estate in Massachusetts at the base of a Cuthbert red raspberry bush. Attracted by its propensity to bear a full crop in the fall, the gardener propagated it, but no attempt was made to introduce it to the public. Finally after several years a landscape architect, called on to lay out new grounds, secured some of the plants, which he afterwards sold to a wholesale plant nursery. All the Erskine Park bushes now growing in gardens and commercial plantations came from these few plants.

Other varities have been produced by men who have made the propagating and testing of new varieties of fruits their life work. The new Delicious strawberry was propagated by a Mr. Morgan of Monroe county, N. Y., who has been sowing strawberry seed and testing seedlings for many years. During this time he has produced three varieties which he considered worth propagating. The first of these was the Monroe, for which he received the Barry medal several years ago. The Ruth was selected later, and lastly the Delicious, which has been tested at the New York State experiment station and received favorable commendation.

The inventor can protect his inventions by patents, but the propagator of new fruit varieties has no such protection Mr. Morgan has received little for his years of growing and testing seedlings. His Monroe strawberry brought him only a few dollars, altho it has proved to be a popular variety.

One of the most regretable cases of this kind is that of the late Jacob Moore, who spent a life time in the improvement of fruits. For many he experimented in hybridizing grapes. As a result of this work he produced the Brighton and Diamond grapes, the first being one of the finest of the red grapes, and the other a white grape of superior quality. Mr. Moore also originated the Bar-seckel pear, and the Ruby Red Cross, and Diploma currants. These varieties made fortunes for their introducers, but poor Jacob Moore spent his later years in poverty, on a little farm on the shores of Canandaigua Lake. It is not right or creditable to our government that men who thus give their lives to the work of improving fruits and vegetables should be unable to secure sufficient remuneration from their efforts to properly provide for their needs in their old age.—E. E. R.

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POULTRY

POULTRY FEED SITUATION

The expense of feeding flocks of poultry can be reduced by purchasing all of the grain in the community immediately after harvest. One of the handicaps of many poultrymen is a lack of capital which prohibits them from buying large quantities of feed. As a result they buy small amounts of feed at one time, the bins are nearly empty at all times and they have to do much expensive hauling and pay the middleman his tax on every load.

This year we have cut down our wheat expense by purchasing a good sized bin of wheat that was smutted so that it would not bring the guaranteed price at the elevator. This wheat is sound and the kernels are large but it is blemished by having a speck of smut at the end of almost every kernel. It has sold as low as $1.75 per bushel in our community and at that price we believe that it is a good investment for poultry feed. The birds like it and seem to thrive on it as well as on first class wheat. Be sure and not buy sour or mouldy wheat in an effort ot save expenses as this will seriously injure the birds.

This year we have the best prospects for corn in four years. The ears are large and seem to be hardening faster than in several years. It is a great advantage to the owner of flocks of poultry to have plenty of hard home grown corn. It pays to save some of the best of seed and then store the remainder in cribs that are made mice and rat proof.

The general farmer may be able to get along without rat and mice proof cribs and bins if he sells most of his grain after harvest. Of course he pays a tribute to the pests but it is not as costly as for the poultryman who must store wheat, oats and corn for a year. Of all farmers, the poultrymen need the best cribs and bins as they must keep good grain and lots of it. If the storage places are unprotected the grain that will be stolen in one year will equal the amount needed by a good sized flock of hens. It pays to fight the rats and mice at all times and use bins and cribs which will allow them no entrance for feeding and breeding. There are few poultrymen that seem to have metal cribs for corn but there is no farmer who can use them to better advantage.

When wheat is high and the farmer raises a crop of good rye he likes to try it on the hens. However, they do not seem to like rye altho it contains the same elements as wheat in about the same proportions. This year we sold our rye immediately after harvest and put the money into smutted wheat. The birds like the wheat and they would not touch the rye. At this date we consider it a very good purchase and the rye would certainly have brought down egg production as the birds would not scratch for it as they work for wheat and much of it might have been left in the litter.

The farmer with poultry who does not raise many oats should plan on buying a bin full after harvest from some neighbor with a surplus. Then the oats need only be hauled a short distance. Many farmers are very pleased to sell their surplus grain to a neighbor at the elevator price or a few cents less per bushel in order to escape the work of a long haul. This is much better than to allow the neighbor to draw the oats to market and then go and buy them back from the elevator man at intervals during the coming year. Of course it takes some capital but some poultrymen can save considerable money by borrowing money at the bank to buy feed rather than put it off and pay more per bushel. The increased cost of the grain is usually much more than the interests charges on the loan. It is best to have the grain fully insured to make the investment safe.

The mill feed situation is not entirely satisfactory from the poultryman's point of view and undoubtedly a little investigation of this business would be desirable. It seems as if we have to pay a little too much for bran and it is a very necessary ingredient of the dry mash. When poultrymen can cooperate and purchase mill feeds by the carload they will probably save money. The custom of buying a few hundred pounds of mill feed at a time for the farm flock makes it more expensive. The purchasing of a few sacks of mash at one time often requires waiting a turn at the elevator and sometimes means an extra trip to town when no other errands are necessary. The farmer-poultryman with ample storage bins can save money by purchasing his feed in large quantities. Sometimes friendly relations with a mill owner will help in finding out a little inside information about the feed situation. Often such a middleman will help the poultryman in obtaining good feed at a fair price if quantities are brought at one time.

The price of beef scrap seems rather high and the birds need it to keep up egg production. However, the farmer with plenty of sour milk can cut down on the beef scrap and save some money. During this period of investigations of cold storage houses and the egg and butter business the poultryman does not know exactly how to plan his business. All poultrymen are willing that the investigators should hunt around for profiteers among the egg producers. It will prove that there is no such animal.

LAMENESS IN HENS

When fowls become lame and rapidly become light in weight it is usually due to tuberculosis and nothing is gained by trying to doctor the afflicted birds. They should be killed and burned immediately to reduce the chances of the disease spreading to the healthy members of the flock. It is best to kill all of the birds in the flock and have a veterinarian inspect those that seem to be fit for food. Then start over with healthy stock after thoroly disinfecting the premises. Of course, if only a few "go light" in a large flock, the remainder of the birds might be of good vigor and very satisfactory for breeding stock. However, it never pays to take risks with a poultry trouble that appears to be tuberculosis. Plenty of range, a clean house and vigorous breeding stock are the best insurance against tuberculosis in a flock of poultry.

It takes Brains to recognize a Good Tractor

WHEN you build a tractor to be sold on the basis of the service it gives, it has got to be sold to a man of brains.

Appearances speak for themselves.

Anybody can tell what a Tractor looks like—whether it has three wheels or four, whether the engine is upright or horizontal, whether its gears are enclosed or at the mercy of sand or gravel.

But it takes brains to get at the facts—to look into tractors instead of merely at them.

More and more, the farmers of this country are looking for the facts which determine the serviceability, economy and long life of a tractor.

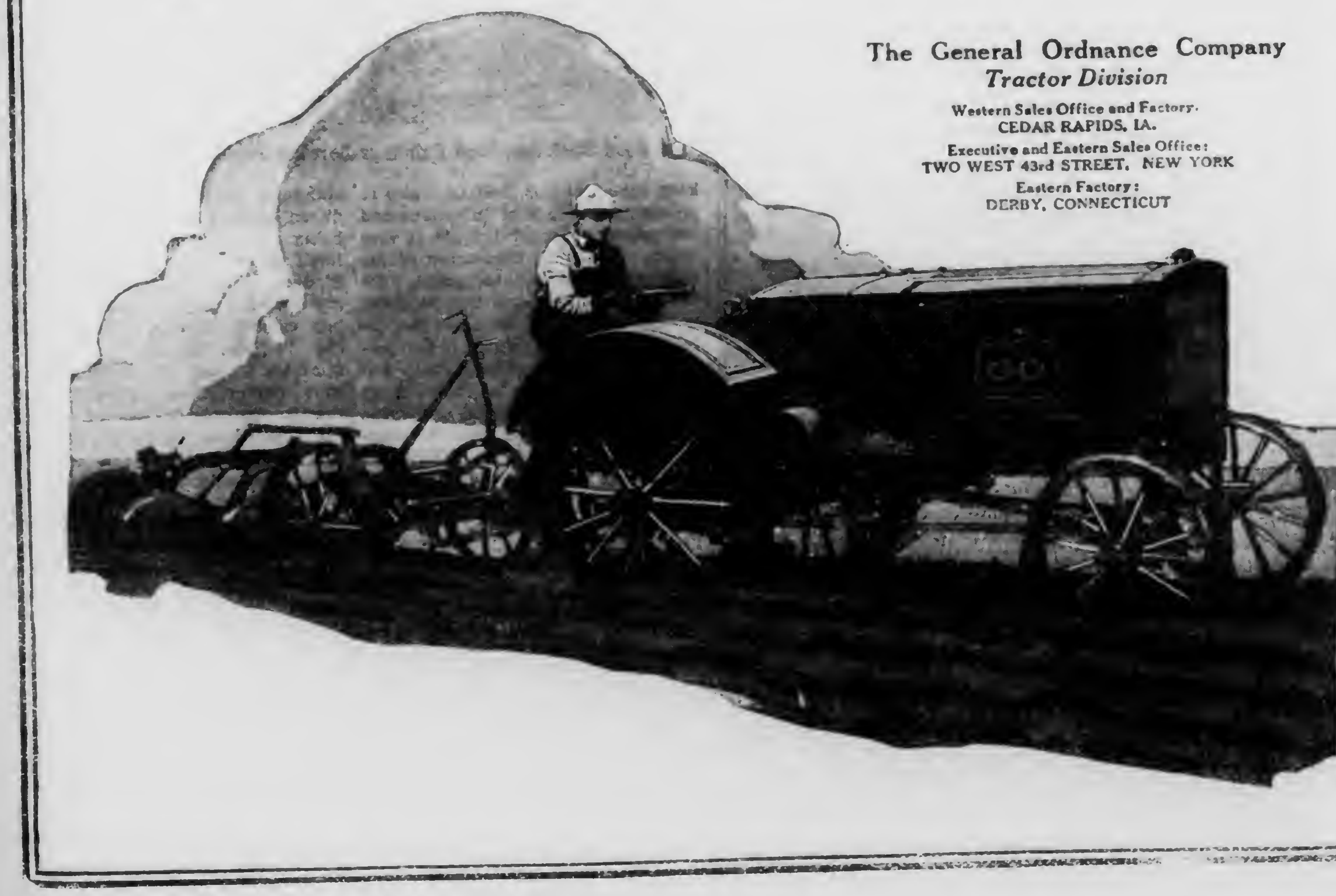
And they are finding them in the G O type of tractor—the four-wheel, four-cylinder type, towards which the whole industry is tending. There are no tracks or sprockets in the G O Tractor to become filled with sand or to use up power in overcoming friction.

They are finding them in the G O driving mechanism—an exclusive feature which cannot be duplicated or imitated. With the G O friction drive, there is no possibility of stripping gears, because they are always in mesh. The speed of the tractor can be changed while in motion. It can be adjusted to any kind of work either in the field or at the belt—there are six speeds forward and six reverse.

They are finding them in the G O construction—so simple that anyone can keep it running strong and true. Every part is accessible. Every gear is enclosed in dust-proof casings—runs in oil. The driving wheels are independently controlled, making it easy to turn short, plow close to corners or pull out of any hole.

The man of brains, who is looking for more facts—for facts about the company behind the G O Tractor, its resources, its guarantee, and its idea of tractor service—can get them without obligation by addressing any of the offices below.

The General Ordnance Company
Tractor Division
Western Sales Office and Factory.
CEDAR RAPIDS, IA.
Executive and Eastern Sales Office:
TWO WEST 43rd STREET, NEW YORK
Eastern Factory:
DERBY, CONNECTICUT



"Feel the Thickness and Softness of these Arctics, Tom"

"THEY'RE Lambertvilles. High quality stuff—these. We couldn't get enough Lambertville Rubber Goods last year—Government bought 'em for the Army and Navy. But they're coming strong now. Plenty for everybody.

"You like their feel, don't you? Notice how thick they are. They're built for wear. Full canvas lined and seven layers of pure new rubber vulcanized into them.

"I've got customers who just raised sand last year because I couldn't sell them Lambertvilles. You see, they're especially fine for working around the barn yard. The ammonia and acids of manure water won't rot them like it does some rubber.

"It's nearly fifty years since the Lambertville Rubber Company commenced making Snag Proofs and their line has grown with the years until now there are five green label qualities—and every type of rubber farm foot gear—each the most for its price. It's a fine old house and I'm mighty proud to be their exclusive dealer here.

"Thank you, Tom, I'm sure you'll be glad you took the Snag Proofs."

There's a Green Label on Every Pair of Lambertvilles

SNAG-PROOF

7 layers of pure rubber friction lined. Thick and wear resisting yet light in weight.

L

Duck vamp where the wear comes. Pure rubber properly cured.

REDSKIN

Red rubber with friction or felt lining. Tough and long wearing.

LAMCO

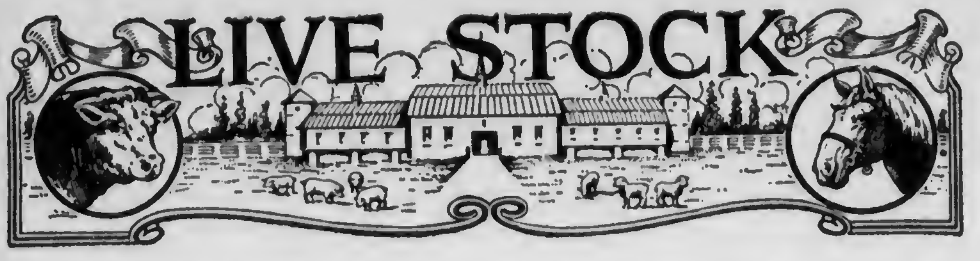
Pure gum, ribbed, or with heavy duck vamp.

SNAG-PROOF

STEAM CURED IN VACUUM

White rubber full duck lined. Made by an entirely new process. Extraordinary value.

LAMBERTVILLE RUBBER CO.
Lambertville, N. J.



LIVE STOCK

KEEPING STOCK WELL

By DR. W. C. FAIR.

Follow the simple rules of practical live stock sanitation and you will be surprised how easy it is to keep your farm animals well. Avoid housing or stabling your live stock in dark, damp, badly ventilated buildings. Endeavor at regular intervals to furnish your stock with a good quality of food and water, and be sure that they have plenty of both. It is important that farm animals have some daily exercise, even if it is only a short walk. The question arises, can the owner of live stock afford to ignore the common and well known simple rules of sanitation. I say no.

Now, then, are the five or six million farmers and stock men of this country doing their level best to keep their animals healthy, also to prevent the spread of infectious and contagious diseases? I doubt it very much. It is true that many of the stables are entirely too small, for the number of animals kept in them, besides the barns are too often located on low land, which if not properly drained are usually damp and decidedly unhealthy for stock. Many stables are poorly lighted and without sufficient ventilation. For sanitary reasons the floor of a stable should be composed of other material than wood. Every stable should be drained, cleaned out daily and disinfected once a week. It is a mistake to allow urine and excrement to remain in a barn for any great length of time. It should be hauled out onto the lot or deposited under cover some considerable distance from your stable. The well is often situated too near your barnyard, drippings and leachings from the manure may make its way into the well. This infected water is almost sure to sicken and perhaps cause the death of some of your stock. It is not expensive and a very good plan to occasionally pour some kerosene in your barnyard, and a few days later taste and scent the well water. If the sap of the barnyard is making its way into the well, you will be able to scent and taste the oil. If possible keep your barnyard clean, and avoid storing much manure in it at any one time. For convenience some farmers throw droppings from stock out of stable windows, and here allow it to accumulate for a long time. This is decidedly unsanitary, especially if you keep cows.

Feeding stock badly cured grain or fodder will frequently sicken them, producing a sort of forage poisoning. The under-feeding of live stock lessens their power of resisting diseases. When live stock are stabled and deprived of fresh air they will not thrive. Every barn should be equipped with ventilators, fresh outside air should be admitted and the foul air allowed to escape.

It is well to keep in mind that disease is the functional, or structural deviation from the normal or healthy standard. It is, of course, that condition which obtains where a living being or animal is unable to adjust itself to its environment. The cause of disease may be divided into two groups, viz., predisposing and exciting causes. Predisposition to disease includes all conditions which diminish an animal's resistance and thus render them subject to the specific exciting causes of disease. Here is where heredity is often charged with being the cause of the disease, or ailment. The most important active causes of diseases are of a parasitic nature, and can be transmitted from one animal to another, from farm to farm, county to county, state to state, and nation to nation. In this way tuberculosis, glanders, and many other infectious and contagious diseases have become world-wide in distribution.

Good Stock and Good Buildings Develop Pride and Make Profits

Muck and swamp soils make excellent timothy meadows. They may be used for that purpose when it is impracticable to drain them sufficiently for vegetable crops.

The grasses and clovers of the pasture lot appreciate good treatment. One form of good treatment is to limit the pasturing; another is to reseed occasionally, still another is to top-dress with needed fertilizers.

WHAT IS BREEDING?

The following definitions have been adopted by the United States Department of Agriculture for use in the "Better Sires—Better Stock" campaign which it will conduct in cooperation with the various States, beginning October 1:

Purebred: A purebred animal is one of pure breeding representing a definite, recognized breed and both of whose parents were purebred animals of the same breed. To be considered purebred, live stock must be either registered, eligible to registration, or (in the absence of public registry for that class) have such lineage that its pure breeding can be definitely proved. To be of good type and quality, the animal must be healthy, vigorous, and a creditable specimen of its breed.

Thoroughbred: The term "thoroughbred" applies accurately only to the breed of running horses eligible to registration in the General Stud Book of England, the American Stud Book, or affiliated Stud Books for thoroughbred horses in other countries.

Standardbred: Applied to horses, this term refers to a distinct breed of American light horses, which includes both trotters and pacers which are eligible to registration in the American Trotting Register. Applied to poultry, the term includes all birds bred to conform to the standards of form, color, markings, weight, etc., for the various breeds under the standard of perfection of the American Poultry Association.

Scrub: A scrub is an animal of mixed or unknown breeding without definite type or markings. Such terms as native, mongrel, razorback, dunghill, piney woods, cayuse, broncho, and mustang are somewhat synonymous with "scrub," altho many of the animals described by these terms have a certain fixity of type even tho they present no evidence of systematic improved breeding.

Crossbred: This term applies to the progeny of purebred parents of different breeds, but of the same species.

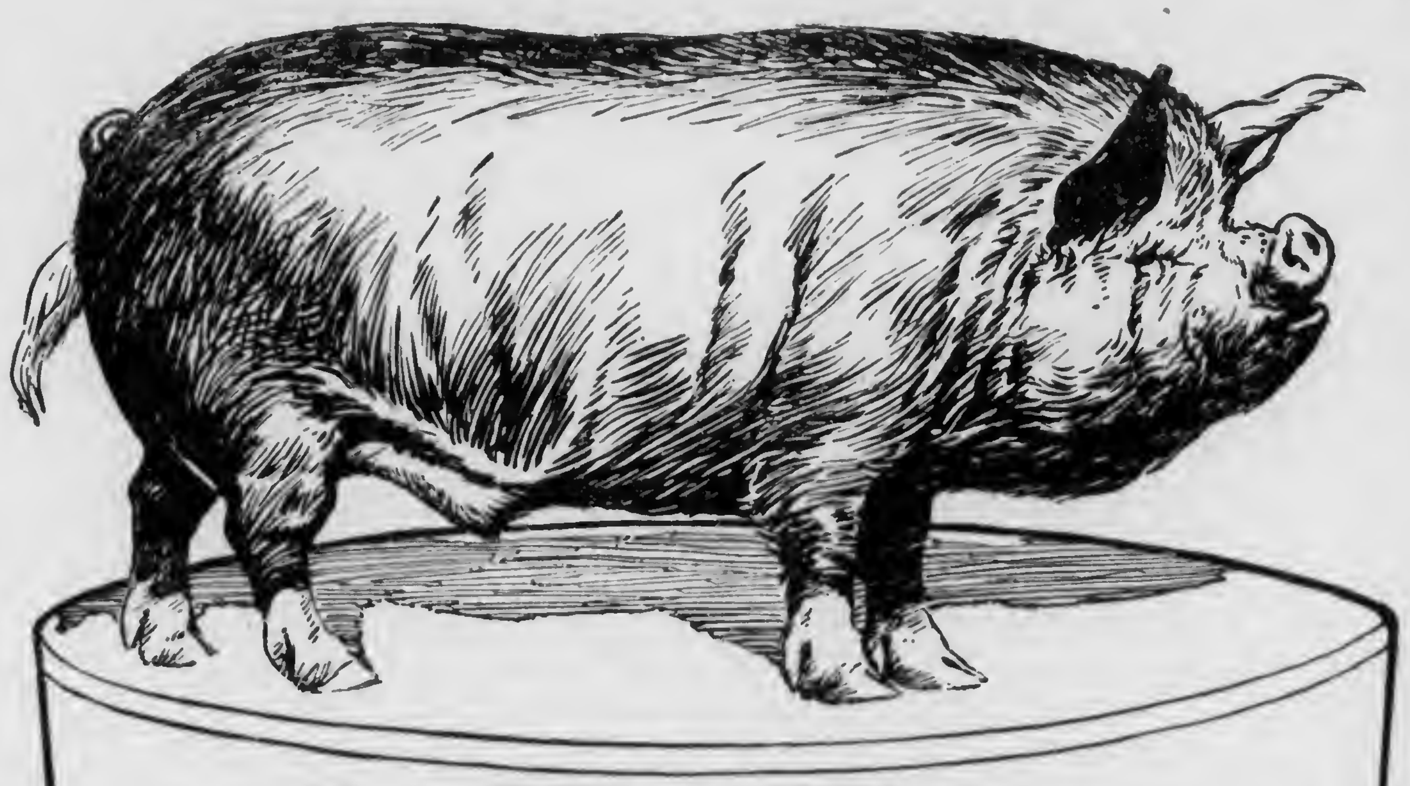
Grade: A grade is the offspring resulting from mating a purebred with a scrub, or from mating animals not purebred, but having close purebred ancestors. The offspring of a purebred and a grade is also a grade, but through progressive improvement becomes a high grade.

CLARENCE OUSLEY RESIGNS AS ASSISTANT SECRETARY

Clarence Ousley, Assistant Secretary of Agriculture, has resigned, and he left the Department of Agriculture July 31. He gave as his reasons that he had finished the work for which he came to the Department during the war and that he could not afford longer to hold public office.

In transmitting the resignation to the President, Secretary Houston expressed deep regret that Mr. Ousley felt obliged to leave the Department and stated that he was constrained to recommend the acceptance of the resignation only in deference to Mr. Ousley's wishes. The retiring Assistant Secretary has made business connections in the East and will remain in Washington.

It's not easy to cheat folks and get away with it for very long. It's even harder to rob the land and not pay the penalty sooner or later. Some day men may be put on trial for stealing soil fertility.



GILBERT HESS, M.D., D.V.S.

Get Rid of Worms

Always keep one compartment of your self-feeder supplied with Dr. Hess Stock Tonic. Make it half Tonic, half salt. Animal instinct will do the rest. Mr. Hog will not only help himself to this great worm destroyer, but—

He'll get a Tonic that will keep his appetite on edge and his digestion good.
He'll get a Laxative that will keep his bowels moving regularly.
He'll get a Diuretic that will help his kidneys throw off the poisonous waste material.

Remember that worms are not a hog's only trouble—making a six-months market hog calls for a stuffing and cramming process with corn, or its equivalent. You are laying on fat faster than nature ever intended. Let your hog's system clog and your hog is in trouble; if there is any disease in the neighborhood, your hog gets it.

Dr. Hess Stock Tonic

Put It In the Self-Feeder

Here's the remedy—Always keep Dr. Hess Stock Tonic before your hogs in the self-feeder; or add it to the swill, or the drinking water—any way, just so they get it.

Here are your results—You have a herd with good appetite—you have a herd free from worms—you have a healthy herd. Their systems are free from poison, free from fever, because the bowels and kidneys are active. They throw off and carry off the poisonous waste material.

Dr. Hess Stock Tonic is good alike for cattle, horses, hogs and sheep. It makes the ailing animals healthy, the whole herd thrifty. It expels worms. **Now, listen to this:** You buy Dr. Hess Stock Tonic according to the size of your herd—2 pounds for each average hog to start with. Add it to your self-feeder, or the swill, or the drinking water. You'll see the good results, or the dealer will refund your money. Always guaranteed.

Why Pay the Peddler Twice My Price?

25-lb. Pail, $2.25; 100-lb. Drum, $7.50
Except in the far West, South and Canada.
Smaller packages in proportion.

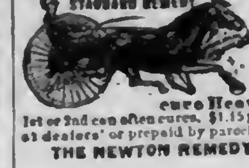
DR. HESS & CLARK, Ashland, Ohio

Dr. Hess Dip and Disinfectant Kills Hog Lice

ABSORBINE
TRADE MARK REG.U.S.PAT.OFF.
will reduce Inflamed, swollen Joints, Sprains, Bruises, Soft Bunches; Heals Boils, Poll Evil, Quittor, Fistula and infected sores quickly as it is a positive antiseptic and germicide. Pleasant to use; does not blister or remove the hair, and you can work the horse. $2.50 per bottle, delivered. Book 7 R free.
ABSORBINE, JR., the antiseptic liniment for mankind, reduces Painful, Swollen Veins, Wens, Strains, Bruises; stops pain and inflammation. Price $1.25 per bottle at dealers or delivered. Will tell you more if you write. Liberal Trial Bottle for 10c in stamps.
W. F. YOUNG, Inc., 154 Temple St., Springfield, Mass.

DIGESTER TANKAGE
FOR HOGS
Write for prices, feeding directions, etc.
IDEAL RENDERING CO.
NORTH WALES, PA.
IDEAL MEAT SCRAPS TRADE MARK

DUROC PIGS Bred for size and quality, 6 to 10 weeks old, $15 each.
H. ED. BARCLAY, R. D. No. 4, Somerset, Pa.



DEATH TO HEAVES! NEWTON'S
HEAVE, COUGH, DISTEMPER AND INDIGESTION COMPOUND
STANDARD REMEDY
Cures Heaves by correcting the cause—Indigestion. Prevents Colic, Staggers, etc. Best Conditioner and Worm Expeller. 21 years sale. Three large cans guaranteed to cure Heaves or money refunded. The 1st or 2nd can often cures. $1.15 per can (this includes 5c war tax) at dealers' or prepaid by parcel post. Booklet free.
THE NEWTON REMEDY COMPANY, Toledo, Ohio

Bone Spavin
No matter how old the case, how lame the horse, or what other treatment failed, try
Fleming's Spavin and Ringbone Paste, $2.08 a Bottle
(War tax paid). One application usually enough. Intended only for established cases of Bone Spavin, Ringbone and Sidebone. Money back if it fails. Write for FLEMING'S VEST-POCKET VETERINARY ADVISER. It is FREE
FLEMING BROS. 253 Union Stock Yards, Chemists, CHICAGO, ILL.

MINERAL HEAVE COMPOUND In use over 50 years
CURES HEAVES
Booklet Free
$3.25 Box guaranteed to give satisfaction or money back. $1.10 Box Sufficient for ordinary cases. (Includes War Tax.)
MINERAL HEAVE REMEDY CO., 408 Fourth Ave., Pittsburgh Pa

50 Head
Purebred Hogs
READING FAIR GROUNDS
Friday, Sept. 19th, 1.30 P. M.
BERKS COUNTY LIVE-STOCK BREEDERS' ASSOCIATION
Geo. H. Rohrer, Sec., Mertztown, Pa.
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ECONOMY FEEDER
A perfect working self-feeder for hogs. A 100-lb. pig pays for it. Saves on purchase price, time, floor space, repairs and feed. Will feed 40 hogs. Sold direct, $18.50. Money refunded if not satisfied. For further information address, THE ECONOMY FEEDER CO., Box 436 New Washington, O.

Near-By Stock Farm Offers Reg Ayrshire cattle; Reg Berkshire pigs, all ages; White Wyandottes, all the most popular blood lines. J. A. McMAHAN, Pottsgrove, Pa

HOUSEHOLD

WHAT A HOUSEWIFE SAW

At Her County Fair

Our Cortland County, N. Y., fair is said to be the largest one in the East with the exception of a famous one in Maryland. I always get at our fair many helpful ideas as to best methods of cooking and canning, as well as house conveniences, furnishings, clothing, etc., besides the exchange of experiences with other housewives of our section. I always have a fair catalog in hand when I go over the exhibits so as to identify exactly each thing that I should be interested in. In this way many valuable hints are obtained that would have been missed if the book were not used.

Our fair offers the biggest lot of special premiums of any county fair in the state, many donated by the business firms of the county, who rack their brains to invent practical contests in canning and cookery, as well as in farm operations. The premiums range in value from a few pounds of coffee thru a long list of household utensils and clothing to purebred calves valued at $200 each. Sewing machines, pianos and sets of dishes are included in the list, the agricultural society helping on the bigger premiums. This assures active interest in the canning, bread, cake and cooky making contests, sometimes bringing a score or two of entries and giving the judges a good bit of study and tasting to decide.

Bread and Cake Contests

I was particularly interested this year in the good appearance of the foods that won prizes in some of the contests. In the bread contest, the winning loaf was not the lightest nor the biggest one, but the one whose interior showed a fine-grained spongy texture of creamy white color and nutty flavor, that promised to hold its moisture reasonably well, and that showed thoro baking clear to the extreme inside of the loaf. To get this thoro baking the loaf had to be a standard size and shape.

There was much interest in a chocolate layer cake contest. The two best cakes were actually black, mahogany black, in color and very moist. The filling between the layers was a delicious black custard that was like a choice confection. (Editor's Note.—Can you not get the recipe for Pennsylvania Farmer housewives benefit? Please try to.)

The increasing number of entries for drop cookies shows that our cooks are conserving time in their cooky baking. The winning loaf of marble cake was composed of angel cake for the white, which was marbled with a very black chocolate mixture. It was very striking as well as delicious.

A New Idea For Pies

In the pie baking contests I discovered that some cooks are using tapioca instead of flour for thickening pie juice. It gives a delicious jelly-like consistency, and the crust does not soak so readily if the pie stands a few hours before it is served. The best apple pie had a delicately browned, thin and tender, flaky crust. The filling was tart summer apples used with no spices for seasoning, just the plain apple flavor, than which there could be none more delicious. The tapioca thickening made the juice take on an amber-colored jelly consistency that was something new in my experience and very delicious in taste. Also, tho the pie stood thruout the fair it apparently did not soak the crust.

Canned Meat Entries Interesting

There were many entries of canned meats, which indicates that our Broome County cooks have learned how to can successfully hearts, tongue, liver, pork, chicken, veal, beef and mutton. Nearly all the entries said that they were cold packed and processed by the 3-hour continuous boiling in a waterbath, tho there were quite a number of entries processed in steam cookers under 15 to 20 pounds pressure for 80 to 90 minutes. The intermittent one-hour a day method seems to have been abandoned in our section as not only too fussy but too unreliable in results and causing too much breakage of cans. Our county home agents, with the aid of a successful farm woman cook and canner, put on some interesting demonstrations of the many uses of steam pressure cookers and canners. Two sizes of cast aluminum steam cookers, a 10-quart and a 17-quart size, were used, also a bigger one made of boiler iron. A tough old fowl was made as tender as a chicken in one hour in one of these steam cookers. The perfect operation of the safety valve was demonstrated. The canning of meats, greens, beets and various other vegetables was demonstrated, also the saving of time in cooking steamed breads, puddings, meats, dry beans, cereals. Housekeepers seemed greatly interested in these steam cookers, also in the iceless refrigerators, whose principles and uses were also illustrated. We learned that by use of the latter on hottest days a temperature of 50 to 55 degrees can be maintained, and at the same time food can be kept in a clean place safe from flies.—Mrs. M. G. Feint, Broome Co., N. Y.

CATSUPS, RELISHES AND PICKLES

Tomato Catsup

Scald ½ bushel ripe tomatoes, slip off the skins, add ½ cup salt, 1 pound sugar, 1 teaspoon each of ground mace and celery seed and red pepper, 2 teaspoons ground cinnamon, and 2 quarts vinegar. Boil slowly until reduced one-half, then pass thru a sieve, reheat and seal in bottles.

Sweet Tomato Pickle

Scald and peel green tomatoes, boil 1½ pints vinegar with 3½ pounds sugar, ¾ ounces each of powdered allspice and cinnamon, 1 ounce powdered cloves and 1 teaspoon salt for 5 minutes, then add the tomatoes and cook gently for ½ hour. Cover the jar in which you keep them, but it is not necessary to seal them.

Piccalli

Put thru the meat chopper 1 peck green tomatoes, 2 small cabbages, ½ peck of red and green peppers, 6 ripe tomatoes, and ½ peck of onions. Put them in a crock and sprinkle on 2 cups salt, cover the crock and let stand 24 hours. In the morning drain, add 2 pound sugar, 1 pound white mustard seed, 2 tablespoons each of allspice, celery seed, whole peppers, mace and cloves, 3 inches of cinnamon stock and vinegar to cover. Tie the spices in a bag to soak in the mixture. Simmer until the vegetables are tender, remove the spice bag, and pour the mixture into glass cans and seal.

Pepper and Onion Relish

Remove the seeds from 6 pounds green peppers, put the peppers in a saucepan and add 4 chopped onions, 1 tablespoon ground cloves, ½ teaspoon each of ground cinnamon, allspice and ginger, and 1 dessertspoon powdered mace. Pour in enough vinegar to cover well, and simmer until vegetables are tender, then rub thru a sieve and seal hot in cans.

Chow Chow

Cut into small pieces 2 cauliflowers, 6 heads of celery, 12 cucumbers, 1 quart sliced onions, and 4 red pepper pods. Put all this in an enamelware kettle, sprinkle with salt, and let stand 24 hours. When ready to put it in pickle, pour 1½ gallons vinegar into a kettle, add 6 ounces mustard, 4 ounces mustard seed, 4 ounces tumeric to give a nice yellow color, 2 ounces black peppper, and 1 ounce, each of allspice and ground cloves. While the vinegar is heating, drain the vegetables and put them in the vinegar, and simmer until tender, then pour into cans and seal.

Picked Greens

Either the cultivated or wild mustard leaves may be used, and either white or black mustard. See that they are tender, then wash free from grit, and pack in an earthenware crock. Cover with a strong brine, weighting them down with a plate, and covering them securely with paper. When wanted for serving, soak what you need of them in warm water for two or more hours, then cook and dress as for fresh greens.

Pickled Nasturtium Pods

These are equal to the famous capers so often used in sauces for serving with fish and lamb. Gather the pods as soon as the blossoms are off, and let them stand in brine for three days, stirring once a day. Then spice some good cider vinegar well with horseradish, pepper, cloves and quartered nutmeg or mace in whole leaves. Pour this over the pods cold and seal.

Pickled String Beans

String 1 gallon white wax beans, but do not cut them up. Cook in salted water until tender, then drain well. Put 1 quart vinegar, 2 cups water, 1 cup sugar, 2 tablespoons mixed whole spices (tied in a bag) into an enamelware kettle and boil 15 minutes, then put in the beans, and cook 10 minutes longer. Can while hot.

Dill Pickles

Use perfectly sound small cucumbers, as near the same size as possible. Let them stand in cold water for 6 hours, then drain them out and put in an earthenware crock thus: First, a layer of cucumbers, then a layer of dill plant, a sprinkling of red pepper, 2 tablespoons salt, then another layer of cuccumbers, and so on until the crock is full. On top put a layer of fresh grape leaves, fill the crock with water, adding ½ pint vinegar for every gallon of the pickles. Weight down with a plate, and examine once a week, and remove any scum that may form. It takes about 14 days to make these pickles ready to eat.

Pickled Red Cabbage

Cut the stalk from a firm red cabbage head, and trim off the outer leaves. Quarter the head, and cut the sections across, then shred on a slicer. Put in a large enamelware dish, sprinkle well with salt as you pile it up, and let stand for a day. Then drain and put in a crock. Boil enough vinegar to cover the cabbage together with ½ ounce, each of whole pepper and allspice per quart of vinegar, tying the spices in a bag. When this vinegar is cold pour it over the cabbage. This will be ready to eat in 4 days, and is best fresh, because after a few weeks it loses its crispness.

Tomato Jelly

Soak ½ box gelatin in ½ cup cold water until soft. Meantime stew 1 quart tomatoes with a pinch of salt, 1 teaspoon sugar, ½ teaspoon celery salt, 1 teaspoon lemon juice and 1 small onion, strain thru a sieve, add 3 cups boiling water, heat again to the boiling point and then add the gelatin. Pour into little cups and when set and cold turn out onto lettuce leaves and serve with mayonnaise dressing.—Helen A. Lyman, Mass.

LANCASTER COUNTY PEAR BUTTER

Down in Lancaster County they make a pear butter that is delicious. Here is the recipe as given me by one of the housewives:

Cook 11 pounds of pears until soft and put thru coarse sieve. Add 3 pounds sugar, two teaspoons cloves, 2 teaspoons cinnamon, ½ cup vinegar. Cook until the whole has been reduced to about half the original quantity.

The same woman told me the secret of her success with fruit butters of all kinds. Frequently housekeepers have trouble cooking fruit butter slowly enough to prevent it from scorching. Her method is to place the mixture in a stone jar and cook it several hours in a moderate oven. The long, slow cooking not only does away with the possibility of scorching but also brings out the rich flavor of the preserve.—Mrs. Lillian B. Arthur, N. J.

COOKING FOR THRESHERS

In the days when we used to have a crowd to feed at threshing time, we planned to have an abundant supply of bread and potatoes as the foundation upon which to build the dinner; then a meat, or sometimes a meat substitute such as a peanut roast with brown peanut gravy, went with the potatoes; the latter always seemed to be relished well for a change from the usual feeds which the men got at most places. Also nothing received a more cordial welcome than a platterful of salt pork, fried brown and crisp. In addition we served one light vegetable, such as cabbage or squash, and usually a big salad bowlful of sliced crisp cucumbers and onions. Sweet apples boiled in syrup were welcomed by our threshers. We usually baked enough pie to more than go around, but sometimes the men enjoyed a tasty substantial pudding just as well as pie, but we never served both at the same meal. We often served apple sauce or fresh berries if we had them; if not, we put on some canned fruits.

But of late we don't have a crowd to feed at threshing time, altho we do about as much threshing as of yore. We manage this way instead: Last year we had three men besides our own two when the oats were threshed; and for the buckwheat the only extra man was an 18-year-old boy who ran the traction outfit. The grain was stacked in the field, the blower handled the straw, and with that machine there was no job for the fourth man. Thus I was relieved of the hard work of preparing for a crowd of hungry men at a time when I had about all I could do to take care of my sick mother and the regular housework.

In these days of labor shortage it seems to us much more efficient and economical to make use of labor-saving machinery if it is to be had, and thus do away with the old-time gangs of men, who often were just in each other's way, especially if the work was not well planned out. We remember that some of the men used to be idle a part of the time, and the jobs often ran so late that the men were kept from their chores, and the cows would go unmilked into the night.—E. M. A., Chautauqua Co., N. Y.

SURPRISE FRITTERS

A bowl of left-over wheatlet and a bowl of left-over sweet corn. I put them thru the food grinder, using the smallest grinder, add 2 eggs and 4 tablespoons milk and a little salt. Then I put it in grease as fritters (or doughnuts) or I take my largest iron skillet and drop it on by tablespoonfuls and bake as griddle cakes. Eat hot from the griddle. Get out a glass of strawberry preserves (or your favorite jam) to eat with them.

Kiss Pudding

Any left-over cereal can be used in fritters or even in a pudding, such as kiss pudding, thus: One quart milk, 2 eggs, 1 cup bread crumbs, vanilla to flavor, and sweeten to taste—not too sweet or it will get watery. With this mixture as a basis, omit the crumbs and use any cereal or use pearl tapioca. Put in oven at 10 A. M., it cooks quickly, and gives plenty of time for the pudding to be just a bit warm for dinner.—Mrs. Mary Shuman, Pa.

STARCH

Use 1 to 4 tablespoons starch, according to stiffness desired, 1 cup cold water, ½ teaspoon borax, ½ teaspoon paraffin or white fat and 1 qt. boiling water.

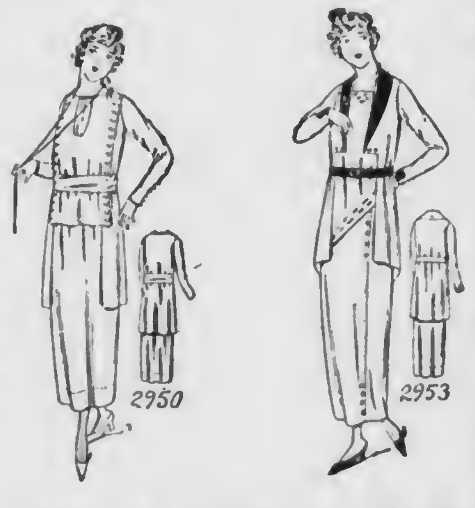
Make a paste of the starch and water. Add the borax, fat, and boiling water. Boil 20 minutes, stirring thoroly until clear and smooth. If a scum or lumps form, strain. Use hot for all except colored starches. Turn garments wrong side out before starching. Starch first those things you want stiffest, as water from garments thins starch. Freezing and wind both take starch from clothes.

A DELICIOUS BIT OF MEAT

Here is how I cooked a delicious bit of meat for Sunday dinner. I find when buying beef for Sunday that the best is the cheapest. The best sirloin steak without bone is of far more account than a roast with a large bone. Have it cut two or three inches thick. Brown thoroly as for frying. Do this while getting ready for church. When almost time to start to church pour a pint or more of water in the skillet, put on a tight lid and place in the oven. Put a few sticks of hard wood in the stove, start it burning, then close stove.—Mrs. Lloyd Shuman.

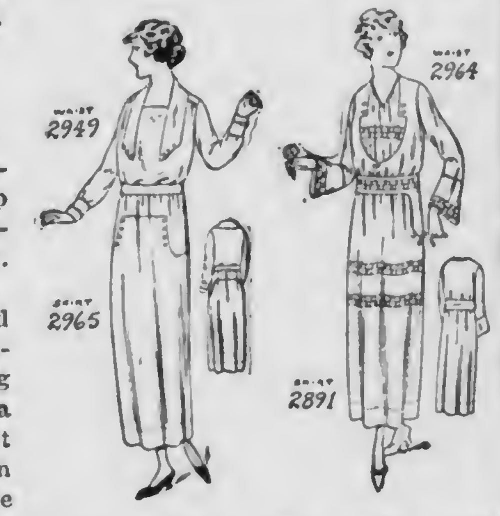
PENNSYLVANIA FARMER PATTERNS

2950.—Stylish For Slim Figures.—The trimming of buttons is smart. As here shown, taupe serge was combined with georgette in a matched shade. Blue velvet and satin would also be nice. The pattern is cut in 3 sizes: 16, 18 and 20 years. Size 18 will require 4⅞ yards of 44-inch material. Width of skirt at lower edge, is about 1½ yard. Price, 10 cents.



2953.—A Chic Costume.—This design was developed in blue satin, with trimming of velvet and embroidery. One could have the vest of contrasting material. Brown and orange, taupe and blue, green and white, blue and ecru would also be pleasing. The skirt is a three-piece model with gathered fulness at the waistline and is made on prevailing lines. Width of skirt at lower edge is about 1½ yard. This pattern is cut in 7 sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. Size 38 requires 5⅞ yards of 44-inch material. Pattern, 10 cents.

Waist, 2949; skirt, 2965.—In gingham this style would be very pleasing. If preferred the waist could be of crepe, and the skirt of cloth. Satin and georgette, or crepe de chine would be attractive combinations. The waist pattern is cut in 7 sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. The skirt pattern also comes in 7 sizes: 22, 24, 26, 28, 30, 32 and 34 inches waist measure. For a medium size, 6⅜ yards of 36-inch material will be required. The width of skirt at lower edge is 1⅞ yard. This costume calls for two patterns, 10 cents each.



Waist, 2964; skirt, 2891.—This very attractive combination would be nice for challie or voile figured or plain. Bands of embroidery in colors would form a suitable trimming. Or one could develop it in blue taffeta with bands of taupe georgette. The waist is cut in 7 sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. The skirt in 7 sizes: 22, 24, 26, 28, 30, 32 and 34 inches waist measure. Its width at the lower edge is 1⅝ yard. To make this design for a medium size will require 5⅞ yards of 36 inch material. This illustration calls for two separate patterns, at 10 cents each.

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33 x 4	24.50	3.45
Non-Skid Straight Side.		
34 x 4	25.00	3.50
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BIG POTATO EXHIBIT AT TRENTON ARMORY

"Agricultural Week" January, 1920.

Preliminary Announcement of Rules and Regulations put out by the State Potato Association.

1. No entrance fees will be charged.

2. Each entry shall consist of a ⅝ basket of potatoes. (Baskets will be furnished at the Armory if so desired.)

3. Competition is limited to potato growers of New Jersey.

4. All potatoes shown must have been grown by the exhibitor in New Jersey during 1919.

5. Exhibitors may enter in as many classes as they wish; but not more than one entry can compete for the same prize.

6. Unclassified potatoes will be classified by the judge.

Classes

Division "A" Commercial Crop:
Class 1. Cobbler type.
Class 2. Green Mountain type.
Class 3. American Giant type.
Class 4. Red skin, pink eye, and other miscellaneous types.
Division "B" Late Crop Seed:
Class 1. Cobbler type.
Class 2. Green Mountain type.
Class 3. American Giant type.
Class 4. Miscellaneous types.

PRIZES

County Premium

All individual exhibits will be grouped by counties and a silver cup will be awarded to the county making the best exhibit. County exhibits will be judged on the following basis:

Quantity (total number of exhibits)	20
Quality	60
Attractiveness of exhibit	20
	100

Individual Premiums

Ribbons will be awarded as individual premiums.

A first, second, and third state premium will be awarded in each class.

In order to stimulate competition within a county a special premium will be awarded to the best entry in each class in each county exhibit.

Sweepstakes

A sweepstake ribbon will be awarded to the best entry in Division A., Commercial Crop, and to the best entry in Division B, Late Crop Seed.

Entry blanks and additional details will be supplied at a later date. —Fred. F. Gardner, Chairman, Exhibit Committee, State Potato Association.

PARCEL POST MARKETING

Results Noted in Lancaster County

Officials in the Lancaster, Pa., post office—in the "Garden Spot of America"—after reviewing the results of Uncle Sam's "farm to table" movement which was launched in February, 1918, thru the medium of parcel post truck lines, have concluded that absolutely no benefit has resulted to the consumer, and no reduction in prices has been scored. However, the service has proven tremendously popular with the farmer, and figures just made public in Lancaster, representing the volume of business handled by government trucks, indicate that what Government leaders looked upon as an experiment will become an institution.

More than 100,000 eggs a week are now shipped out of Lancaster, Adams and Fulton counties by government routes to dealers in Philadelphia, Baltimore and Atlantic City. Eggs shipped in the morning reach their destinations in the evening, and checks are immediately mailed back to the farmers. Thus, the farmers of eastern Pennsylvania can deal directly with the big dealers, and obtain cash for their products.

The Lancaster officials explain that the method of payment is the real weakness of the farm-to-table project, and that shipping out in such small quantities, the farmer does not feel that he is amply paid for his trouble. On the other hand, by forwarding his produce to the big dealers, the farmer enjoys a market with "a bottomless pit," where he can dump every pound of butter and every egg every day in the year for cash, with a minimum amount of handling. It is this ever-receptive market that will cause an expansion of the system of Government truck lines, postal officials say.

While both dealer and farmer are deriving benefits from the produce-post lines, the resident of the small city, out of which these lines are operated, is faced with higher prices for his butter, eggs and poultry. Instead of hauling their produce to the city markets and standing back of stalls for hours to sell it, farmers now send virtually their entire stock into the bigger markets. The result is that a shortage of eggs and butter—to a degree—is caused in the markets of the small city, and prices advance.

The Lancaster Post office, which two years ago handled practically no farm produce, is today a clearing house for tons of stuff every month. In addition to the 100,000 eggs a week, there are handled more than 5,000 day-old chicks daily, and more than 500 live fowls weekly. Five hundred pounds of butter are also shipped every week. These figures apply only to the line operating between Lancaster and Gettysburg, and are about half of those representing the line running from Lancaster, thru Oxford, Chester Co., to Philadelphia.—R. G. Regester, Lancaster Co., Pa.

RAILROADS EARN SURPLUS

Government operation of the railroads in July showed a surplus instead of a deficit. Director General Hines announced today that preliminary figures of the month's business indicated net operating income of $77,000,000. After allowing one-twelfth of the annual rental due the railroad companies, the net gain is about $2,000,000, as compared with a deficit of $22,031,000 the preceding month, and $65,000,000 in February, the largest deficit of the year. The net loss to the Government for seven months is $290,526,307.

In calculating the surplus, however, no account was taken of the wage increase offered the shopmen, which has not yet been accepted by them.

Mr. Hines pointed out that the falling off in freight business continued to be a big factor in the Railroad Administration's finances, altho business has grown steadily since February. The freight traffic was about 25 percent larger than the average July of the three-year test period, but expenses likewise were greater. Passenger traffic also showed a substantial increase.

PASSING EVENTS IN PICTURES

(Copyright by Underwood & Underwood)

1.—General Pershing Making His Farewell Review of the A. E. F. in France.

2.—Four of the Cincinnati Reds—Groh, Kopf, Roth and Daubert.

3.—Gigantic Periscope Used by the Crown Prince at Battle of Verdun, Miles Away.

4.—West Point Cadets Must Learn to do Every Kind of Work—Even Peel Potatoes.

5.—West Point Cadets Break Up Their Summer Camp at Monroe, N. Y.

6.—Presidents of Five State Farm Bureau Organizations, representing 250,000 farmers

7.—Ranger, R. E. Madson, of Texas. The Tallest Visitor to the White House, 7 ft. 6 in.

8.—The Prince of Wales Helps to Lay Cornerstone of Woman's Building at Halifax.

9.—Carry Home Army Food Purchased at Sale in New York.

Markets

PHILADELPHIA PRODUCE

Philadelphia, Pa., Sept. 8, 1919.

Never in our experience have we seen nearby fruits and vegetables in as light supply at this season of the year as they are at the present time. Today the market was practically bare of many commodities from Pennsylvania and New Jersey that are usually very plentiful. With the exception of white potatoes, sweet potatoes, a few lima beans, a few tomatoes and a small quantity of cabbage and beans, there was practically no vegetables here whatever.

Vegetables

Receipts of potatoes are moderate and under a fair demand the market is ruling about steady as follows: Southern barrels, No. 1's, $5@5.25; southern field run No. 1's $4@4.50 per barrel, and No. 2's $2.50@3.25. New Jersey potatoes in 150 lb. sacks are selling at $4.75@5 for cobblers and $3.85@4.25 for Giants, with No. 2's of both varieties at $2.75@3.25. Car lot receipts in bulk are selling from $3@3.50 cwt. The potatoes hauled in by the nearby farmers are selling from $1@1.25 for No. 1's and 50@90c for undergrades.

Artichokes are now arriving on market and selling at $10 per drum. Were it not for the generally poor quality the bean market would be much higher than it is. On account of the poor quality, green wax beans are selling 50c@$1.25 per ⅝-basket. Bunch beets are in good demand and selling around 4@5c per bunch. A few Brussells sprouts are appearing on the market and selling around $10 a drum. Cabbage which was in very light supply last week and selling around $70@75 a ton is now coming quite freely from New York state and prices have taken a sharp drop with most sales today at $40 per ton with a little at $45 and some at $36. These increased supplies from New York state are causing lower prices in New Jersey cabbage which shown today at 35@75c a basket. Carrots are scarce and firm at $3@4 per 100 bunches. Cauliflower is in light supply and selling around $2.50 per crate containing about a dozen heads. Celery shows a wide range according to size. Some bunches selling at 75c others 65c, and some as low as 20c. Scarcity in corn is making high prices, sales today lead from $1@1.50 per ⅝-basket in good stock while Pennsylvania sold from $2.50@3.50 per 100 ears. New York state is now supplying the only cucumbers on the market at the present time which are meeting a good demand at $1.50@2.25 per bushel, with the dills at $2.50@2.75 and the count pickels at $3.50@4.50 per bushel. Egg plants from New Jersey are mostly poor and for this reason are only bringing from 30@60c a basket. Garlic is weak and lower at 20@30c a pound. There is a fair demand for horse radish at $7@7.50 per cwt. Lettuce when strictly fancy is bringing from $1.25@1.50 a box but there is a lot of poor common and leafy lettuce on the market which sells slowly at 50c@$1 a box.

Fancy onions are firm from $3.50@3.75 per sack containing 100-lb., while poor onions are moving slowly at $3@3.25 a sack. Lima beans sold today at $3.50@4 per hamper while the ⅝-basket ranged from $2.25@3 on the improved beans and $1.50@2 per ⅝-basket. Fancy small okras are wanted at $2 per ⅝-basket while the large okras are not wanted at 50@75c a basket. The only peas now on the market are from California selling from $7@7.50 per drum. Peppers are selling from 25@40c a basket. Romaine is scarce and brings from $1@1.50 a hamper. Squash sold today from 50@75c a basket. Strictly fancy tomatoes are very scarce and wanted and such when here sell very readily at $2@2.50 per basket while ordinary tomatoes are bringing from $1@1.75 a basket and No. 2's from 60c@$1 a basket. Sweet potatoes are probably the most plentiful commodities in the vegetable line, with the possible exception of white potatoes, now on our market and prices now prevailing are the lowest of the season so far, yellow No. 1's selling today at $1@1.20 a basket and reds from $1.25@1.35. While No. 2's sold from 50@75c per basket. New Jersey spinach has made its appearance on the market and has sold from 75c@$1.25 per ⅝-basket. Turnips remain steady and unchanged at 40@65c a basket.

Fruits

Strictly fancy hand picked apples are bringing good prices New Jersey ⅝-baskets selling from $1@2.25 for No. 1's and 50c@$1 for No. 2's. Southern apples in barrels are ranging about as follows: Smokehouse, $6@7.50; Grimes Golden, $6.50@8.50; McIntosh, $8.50@9; Red Streak, $6.50@7.50; Pippins, $6.50@7.50; other varieties, $3.50@7 per barrel. A car of Delaware Stayman-Winesaps sold at $1.85@2.65 per bushel hamper, while other varieties range from $1@2.25 per hamper. Two cars western box apples sold here today one car bringing from $2.75@3.25 a box and the other are from $2.55@3.45 per box. A few crab apples are arriving and selling from $12@16 a barrel. Bartlett pears are in good demand at $3@3.25 per bushel for No. 1's and $2@2.25 for No. 2's. A car of New York State Seckel pears sold here this morning at $4.75 per bushel for fancy and $3 per bushel for choice. Nearby peaches from New Jersey are about wound up. The light supply selling today at $1@2.50 per ⅝-basket, and $3@3.50 per crate. Peaches from New York State, however, have started to arrive, the first car of the season getting here this morning and selling at $1.50@1.60 per half bushel baskets. There were 5 cars of Delaware grapes here today which met a good demand at about the following prices: Concords, pony basket, 18@21c; Concords, jumbo basket, $1.15; Concords, 8-basket carriers, $1.25; Delaware pony basket, 23@24c.

Only a few Damson plums are arriving by express and these are selling 70c per small handle baskets. The cantaloupe market is improving; good New Jersey stock now selling from 50@90c per ⅝-basket, and culls from 20@35c. A few cars western cantaloupes are still arriving and selling from $1.50@3 per standard crate and $1.25@1.75 per flat crate. Watermelons are meeting a slow demand altho the recent hot spell has stiffened the market to some extent, some sales now being made at $100@300 per car for Southern melons, while New Jersey melons are selling from $8@15 per 100. The second crop of New Jersey raspberries are now on the market and selling from 12@15c. Huckleberries are winding up their season, many of the supplies being very poor, sales being from 15@25c per quart.

Poultry

The live poultry market is ruling firm and about the following range of prices: Live fowls, 31@36c. Chickens, not leghorns, 32@36c; Leghorn chickens, 28@31c; old roosters, 23@25c; spring ducks, 28@30c; old ducks, 25@37c.

Eggs

Since the advance of 2 cents per dozen in all grades of eggs which took place some few days ago, the market has been ruling firm and unchanged from day to day with an active demand that quickly absorbs all offerings of strictly fancy eggs at full quotations with some extra fancy well known marks bringing a premium over prices quoted, which are about as follows: Pennsylvania and other nearby current receipts, 52c per dozen; do., firsts, 54c; fair to good, 48@50c; seconds, 44@47c; western eggs, as to quality, 50@54c.

LANCASTER PRODUCE MARKET

Lancaster, Pa., Sept. 8, 1919.

Lancaster County's answer to the campaign against the high cost of living was given here today with an advance in the price of eggs of five cents a dozen, and a boost of fifty cents a basket for peaches. Apples were also higher and other prices firmly maintained despite a large supply of produce.

Butter and Eggs.—Creamery butter, 62@65c per lb.; country butter, 65@70c; eggs, 65c per dozen; duck eggs, 50c; goose eggs, 10c each.

Poultry.—Dressed old chickens, $1.75@2.50 each; dressed young chickens, 75c@$1 each; live chickens, 28@30c per lb.

Vegetables.—Corn, 10@25c dozen; beets, 5c bunch; beans, 10@12c ½ pk.; tomatoes, 60@85c basket; do., 6@8c box; lima beans, 50c quart; do., 20@25c lb.; cauliflower, 10@15c head; cabbage, 5@10c hd.; sweet potatoes, 35c ½ pk.; potatoes, $1.75@2 bu.; do., 25@30c ½ pk.; turnips, 15c ½ pk.; spinach, 20c ½ pk.; parsnips, 5c box.

Fruit.—Peaches, 10c per box; do., $2@2.50 per basket; pears, 5@15c per box; cantaloupes, 5@8c each; watermelons, 35@85c each; grapes, 20@40c ½ pk.

Grain Market.—Wheat, $2.20 per bu.; rye, $1.65; oats, 85c; corn, $1.95; timothy hay, $30 per ton; mixed hay, $28; wheat straw, $10; oat straw, $5 per ton.

YORK PRODUCE MARKETS

York, Pa., September 6, 1919.

There is a shortage in many of the fall products that are usually to be seen at this time of the year. There is an abundance of York County cantaloupes on the market now for ten days. The quality is not of the best and the price is very low. Loads of 400 to 600 cantaloupes not averaging over 4@5c each. Sweet corn which was a drug on the market two weeks ago is now being hunted up by eager buyers. Potatoes are slow. It is the time of year when the lower-end people begin to dig and haul. They are selling at $1.50 as a rule.

Eggs.—50c per dozen.

Butter.—Country, 45@55c pound; separator, 60@70c pound; milk, 10c quart.

Poultry.—Hens, 25@28c pound; springers, 30@32c pound; dressed, 75c@$2 each.

Vegetables.—Potatoes, 12@30c ½ peck; $1.50@2 per bushel; cabbage, 3@7c head; lettuce, 2@5c head; beets, 5c bunch; onions, 5c bunch; radishes, 5c bunch; onions, 20@25c ½ peck; lima beans, 35@40c quart; soup beans, 20@25c quart; celery, 5@10c stalk; egg plants, 5@8c each; beans, 10@15c ½ peck; lard, 38@40c pound.

Fruit.—Apples, 10@40c ½ peck; $1@2 per bushel; plums, 7@10c box; peaches, 10@15c box; $1.75@2.25 a basket; cantaloupes, 2@8c; watermelons, 10@15c each.

Retail Grain Market.—Wheat, $2.40; corn, $2.25; oats, $1.01; rye, $1.65; bran, $3 per cwt.; middlings, $3.50 per cwt.

Wholesale Grain Market.—Wheat, $2.20; corn, $2.10; oats, 86c; rye, $1.40; bran, $54 per ton; middlings, $70 per ton.

NEW YORK PRODUCE

New York City, Sept. 8, 1919.

Butter.—Unsettled; receipts, 10,858 tubs; creamery, higher than extras, 57½@58c; extras, 92 score, 57c; firsts, 53@56½c; packing stock, current make, No. 2, 46c.

Eggs.—Irregular; receipts, 25,780 cases; fresh gathered extras, 55@56c; do., extra firsts, 52@54c; do., firsts, 47@51c; state, Pennsylvania and nearby western hennery white, fine to fancy, 73@75c; state, Pennsylvania and nearby hennery white, ordinary to prime, 60@72c; do., brown, 60@65c; do. gathered brown and mixed colors, 55@57c.

Cheese.—Unsettled; receipts, 2,579 boxes; state, whole milk, current make, flats, specials, 31@31½c; do., average run, 30@30½c; state, whole milk, current make, twins, specials, 30½@31¼c; do., average run, 29½@30c.

Poultry.—Live, steady; chickens, 29@33c; fowls, 32@35c; roosters, 23c; turkeys, 25@30c; dressed, steady and unchanged.

Vegetables.—Potatoes, Long Island, $4@5 per 165-lb. bag; Jersey No. 1, $4.50@4.75 bag; No. 2, $2.50. Beans, green, 50c@$2 basket; do., lima, $3@5 basket. Beets, $1.50@2.50 per 100 bunches. Carrots, $1@2 per 100 bunches. Cabbage, $4@6 per 100. Lettuce, 25@75c basket. Tomatoes, No. 1, $1@3 box.

Fruit.—Apples, $1@2 basket. Peaches, $1.25@3 crate; Jersey, $2@3 crate. Blackberries, 15@28c quart. Huckleberries, 10@25c quart. Muskmelons, $1@3 crate.

PHILADELPHIA LIVE STOCK

Philadelphia, Pa., Sept. 8, 1919.

Receipts of live stock for week ending September 6 were as follows:

	Beef Cattle	Sheep and Lambs	Hogs
Total for Week	2,688	6,465	5,336
Previous Week	3,000	7,393	4,208

Calves.—Receipts of calves last week were 2,038 head against, 1,766 head week previous.

Beef Cattle.—Choice cattle ruled steady, with demand absorbing the offerings of this description. Calves weak and lower, due to a slow demand, easier outside advices and increased pressure to sell. Steers, good to choice, $14.75@16.50; do., fair, to good, $12.75@14.75; common to fair, $11.25@12.75; cows, fat, per lb., good to choice, cornfed, 8¾@10c; fair to good, 6¾@8¾c; do., common to fair, 4¾@6¾c; bologna cows, 4¼@5¼c; calves, extra choice, $22.50@23; fair to good, $19@21; common, $12@16; heavy, $8@12; Tennessee, choice, $16@19; other southern, $8.50@12.50.

Sheep and Lambs.—The general market ruled firm, due to fairly active demand and moderate offerings, and prices of choice lambs were higher. Sheared sheep, wethers, extra, $11@11.50; good to choice, $9.50@10.50; medium, $7.50@8.50; common, $4@5; ewes, fat, heavy, $8@9; spring lambs, choice, $16.50@17.25; medium, $12@14; culls and common, $8@10.

Hogs.—Demand was moderate and the market ruled steady. Supplies were sufficient for trade requirements. Quotations for best western, $22.50@23; Pennsylvania and Maryland, $20.50@21.

City Dressed Stock.—There was a fair inquiry for steers, heifers and cows and values generally ruled steady under moderate offerings. Hogs were in fair request and steady. Calves sold fairly and values were well maintained. Quotations:

Steers, 16@23c; heifers, 17@22c; cows, 11@16c; dressed, choice, 29@31c; country dressed, 25@28c; sheep, 20@23c; lambs, spring, 28@32c; hogs, 29c.

LIVE STOCK MARKETS

East Buffalo, N. Y., Sept. 8.—Cattle.—Receipts 600; slow.

Calves.—Receipts, 100; steady, $7@23.50.

Hogs.—Receipts, 2200; 25@50c higher; heavy, $20; yorkers, $20.75; pigs, $19; roughs, $16@16.50; stags, $10@14.

Sheep and Lambs.—Receipts, 600; lambs, 25c higher; lambs, $8@16.75; yearlings, $7@12; wethers, $9.50@10; ewes, $5@9; mixed sheep, $9@9.50.

Cincinnati, O., Sept. 8.—Hogs.—Receipts, 1300; steady.

Cattle.—Receipts, 4000; steady; calves steady.

Sheep.—Receipts, 6000; weak; lambs steady.

Pittsburgh, Pa., Sept. 8.—Cattle.—Steady; supply light; prime, $15.75@16.50.

Sheep.—Strong; supply light; prime wethers, $10.50@11.25; culls and common, $3@5; lambs, $9@15.75.

Veal Calves.—$23@22.50.

Hogs.—Higher; supply, 22 double decks; prime heavies, $19.50; mediums and heavy yorkers, $20.50@20.65; light yorkers, $19@19.50; pigs, $18.50@19; roughs, $16@17.50.

Kansas City, Mo., Sept. 8.—Hogs.—Receipts, 450; steadier to 10c higher; bulls, $18.50@19.60; medium, $18.25@19.40; lights, $18.10@19.60.

Cattle.—Receipts, 450; market for week, best light beef steers, steady; other grades and classes, unevenly, 10c to 40c lower; butcher stock, mostly 15c to 25c lower; canners, weak to 25c lower; calves, $1.25 to $1.50 higher; stockers and feeders, 25c to 50c lower; she stock, 15c to 25c lower.

Sheep.—Receipts, 1100; market for week, native lambs steady to 25c lower; western lambs, 25c to 50c higher; good fat ewes, 25c to 50c higher; other sheep, breeders and feeders, steady.

Chicago, Ill., Sept. 8.—Hogs.—Receipts, 4000; strong; mostly, 25c to 50c higher than yesterday's average; heavy, $18@19.85; medium, $18.50@20.25; light, $19@20.25; light light, $18.50@19.75; heavy packing sows, smooth, $16.75@17.75; packing sows, rough, $16@16.75; pigs, $16.75@19.

Cattle.—Receipts, 2000; compared with week ago, heavy steers, weak, good and choice, light and handy weight steers and better grade heifers, 25c to 50c higher; canners, 15c to 25c higher; bulls, 25c higher; westerns, mostly 25c lower; feeders, steady to strong.

Sheep.—Receipts, 7000; compared with week ago, native lambs steady to 25c higher; westerns, mostly steady; fat ewes, unchanged; yearling wethers, strong to 50c higher; feeder lambs, mostly 25c to 50c lower; feeders, yearlings and wethers strong; few choice breeding ewes, strong; others weak to 50c lower.

Lancaster, Pa., Sept. 8.—Cattle.—Receipts, 8154 head, against 7260 head last Monday; market sluggish; prices lower; many unsold; good choice steers, $14@15.25; fair to good steers, $12.75@13.75; medium to fair steers, $12.25@13; common to medium steers, $7.75@9; smooth and fat bulls, $11@12.25; medium to good bulls, $9.25@10.25; common to medium bulls, $7.50@9; smooth and prime heifers, $12.25@13.25; common to medium heifers, $8.15@9.85; good to choice cows, $8.25@10.25; fair to good cows, $6.75@8.15; common to medium cows, $5@5.35; stock bulls, $9@9.85; good to prime calves, $21@22.25; medium to good calves, $19@20.75; common to medium calves, $13.25@16.75.

Sheep.—Receipts, 100 head; lambs, $16; sheep, $13.50@15.75.

Hogs.—Receipts, 231 head; market slow; prices lower good to prime, $19.50@20.50; light to medium, $18.50@19.25; roughs, $16@17.50; stags to sows, $14@16.50.

PHILADELPHIA HAY AND GRAIN

Philadelphia, Pa., Sept. 8, 1919.

Baled Hay and Straw.—Receipts, 156 tons of hay. Hay in ample supply and prices favored buyers under a slow demand. Straw steady. Timothy hay, No. 1, $35@36; No. 2, $32@33; No. 3, $29@30; clover-mixed hay, light mixed, $32@33; No. 1 mixed, $30@31. Straw, No. 1 straight rye, $13.50@14; No. 2 do., $12.50@13; No. 1 tangled rye, $13@13.50; No. 2 do., $12@12.50; No. 1 wheat straw, $12@12.50; No. 2 do., $11@11.50; No. 1 oat straw, $12@12.50; No. 2 do., $11@11.50.

Bran.—In small supply and quiet. Car lots, including sacks, soft winter bran, city mills, in 100-lbs. sacks, per ton, $51; western soft winter bran, in 100-lb. sacks, per ton, $48@49; spring bran, in 100-lb. sacks, per ton, $47@49.

Corn.—Yellow, to arrive, $1.95@2.

Oats.—No. 2, white, 80@81c; No. 3, 79@80c.

NEW YORK HAY AND GRAIN

New York City, Sept. 8, 1919.

Feed.—The recent break in coarse grains has served to increase offers of mill feed and prices have experienced quite a noticeable reduction. Buyers were not disposed to pay the recent high levels while other markets were declining, and mills finally responded to the general pressure and made concessions in orders to attract more business.

Quotations: City feed, bran, $47; middlings, $57 in 100-pound sacks; red dog, $69; nominal, in 100-pound sacks; Western spring bran, $45.50@46; standard middlings, $59; flour middlings; $64; red dog, $71.50, all in 100-pound sacks, 30-day shipment. Oat feed, $31@32; rye middlings, $52; white hominy feed, nominal, all in 100-pound sacks. Cottonseed oil meal, October shipment, $79; linseed oil meal, nominal, in 100-pound sacks.

Hay and Straw.—There is a little better trade in evidence today and it would seem that the bottom of the market had been reached for the time at least, tho we see no improvement in prices and on the low grades of small bales there is considerable irregularity in reported sales. A little call is reported for light clover mixed, but heavy mixed is very slow sale. Rye straw barely steady. Oat straw scarce and watered.

Hay.—No. 1 large bales, $35@36 ton; No. 2, $31@33 ton; No. 3, $27@29; shipping $24@26 ton. Fancy light clover mixed, $31@33 ton. Clover, No. 1, mixed, $24@30.

Straw.—Per ton, No. 1 rye, $16@17; No. 1 oat, $14.

Wheat.—No. 2 red, $2.37½; No. 2 hard winter, $2.37½.

Corn.—No. 2 yellow, $1.84½; No. 3 yellow, $1.83¾.

Oats.—No. 2 white, 82½c; No. 3 white, 81c.

Rye.—Export, $1.51¾.

PHILADELPHIA DAIRY MARKET

Philadelphia, Pa., Sept. 8, 1919.

Butter.—The Produce Exchange was closed and little interest was shown in the wholesale markets for butter. Prices were nominally unchanged.

Fresh, solid-packed, creamery, extra, 59c; high-scoring goods, 60@62c; the latter for jobbing sales; extra firsts, 58c; firsts, 63½@56c; seconds, 51@53c; thirds, 48@50c; sweet creamery, choice and fancy, 61@63c; do., fair to good, 56@60c; ladle-packed, as to quality, 47@49c; packing stock, 45@46c; fancy brands of nearby prints jobbing at 64@66c; good to choice, 59@63c; fair, 54@57c.

Cheese.—Firmly held. New York and Wisconsin flats, current make, 32¼@32½c; specials higher; fair to good, 31@32c; jobbing sales of fancy goods, 33@34c.

NEW YORK MILK MARKET

New York City, Sept. 6, 1919.

Trade was slow last week with slightly increased supply, surplus large for this time of year and some distributers manufacturing. The September rate for 3 percent milk in 200 mile zone is $3.20 per 100 lbs.; add 4 cents per 100 lbs. for each one-tenth of one percent extra butterfat.

Receipts of milk and cream in 40-quart cans for the week ending September 6th, 1919 were as follows:

Railroad	Milk	Cream
Erie	40,376	3,990
Susquehanna	5,990	67
West Shore	14,010	2,004
Lackawanna	58,776	2,960
N. Y. Central (long haul)	152,412	3,664
Ontario	45,110	1,889
Lehigh Valley	46,478	1,340
New Haven	6,575	68
Pennsylvania	12,116	462
Other Sources	6,200	250
Totals	388,043	16,714
Same week last year	397,007	18,163

GRASS SEED

Toledo, O., Sept. 8, 1919.

Clover, cash, $28; October, $28.40; December, $27.40; March, $27.60. Alsike, cash, $27.40; October, $24.50; Timothy, cash, $5.10; September, $5.40; October, $5.30; December, $5.52½.

TOBACCO MARKET

Altho the acreage of the Pennsylvania tobacco crop has been considerately reduced the condition of the crop is comparately good, owing to recent rains which it seems are wanting in practically all other tobacco growing localities. This establishes a situation which should be greatly to the benefit of growers in this section and evidently will be reflected from time to time in good and advancing prices all along the line. It is well that so far as known no transactions in the new crop have been reported and growers should persistently refuse to price their tobacco until something more definite is known. It should be remembered that sales to speculators often do not hold at time of delivery and that in the event of profits the same belong logically to the producer who is in no way dependent upon the middleman for his measure of success. The present outlook should greatly encourage those with holdings of the 1918 product, a considerable part of which is yet in the hands of growers and others. It is probable that a full valuation of this residue may not be reached before the new crop is ready for delivery. It has been shown in past years that buyers often have been able to resist advances as applied to a relatively small and thus non-essential part of an old product, but would have to come forward when a new crop was ready.

A new angle of the Washington situation is a suggestion that packers undertake distribution by a method that would make them responsible for costs to consumers. Those with their ears to the ground at Washington predict some nature of Government supervision not only of the packing industry but of the live stock men is certain.

GRANGE OPPOSES MILITARY BILL

The army reorganization bill is before Congress, carrying provisions for a standing army of approximately 600,000 men. A special bill increasing the officer personnel to 18,000 has already passed both the House and Senate. The whole proposition, it is frankly stated, means an annual cost of $600,000,000.

The Grange speaks for the farmer people of the country in opposing any plan, state or national, which features a compulsory military training. It is on record to this effect in vigorous language in a resolution adopted at its last annual session. It has endorsed plainly and freely, the League of Nations the prime object of which is to do away with the standing armies which menaced and nearly crushed the best civilization the world has yet produced. The National Grange now sees in the drive for the adoption of this $600,000,000 a year program of the American militarists a plan to build up here what we have crushed in Germany, a military machine. This machine, if created, will rest on the narrow and autocratic authority with which each officer is vested when the first shoulder strap is pinned on the shoulder of the new second lieutenant. The human weakness for authority and then more authority, functioning from the second lieutenant to the lieutenant general has reached even to the one time pacifist of the cabinet, the present war secretary. It is not an American ideal and the Grange is opposed to it. There is, of course, a necessity for some standing army, but no demand and no necessity outside of an artificially created demand, plus the very plain desire of a lot of lieutenants and captains and perhaps a few higher-ups, to live at government expense, for a 600,000 man army, and a $600,000,000 burden. If any one thinks this is a popular subject let him discuss it with a group of doughboys just home from France.

THE NEIGHBORHOOD PICNIC

Last night we had a community picnic in our neighborhood. With the aid of the telephone all of the neighbors were reached with little difficulty and each family brought enough for its own use and also a supply of dishes. At the picnic at a neighbor's home all of the eatables were distributed on a long table. It was simply a proposition of selecting what you wanted as the dishes and platters went down the line. After the picnic spread, the remainder of the food and the dishes were gathered up by their rightful owners and very little work was left for the neighbor who kindly furnished the picnic grounds.

We had no down town speaker for this spread. Not even an expert on something or other. We had no set speeches to bore the listeners and scare those who were expected to talk. After the meal we told stories around the table. Some were only good for one story each but others had a good supply and as the crowd warmed up it became a contest to see who could get away with their story first. The remark, "Well, here's another folks," soon became the standard method of speakers introducing themselves.

This is what we call a simple picnic, right in the community—so no long drives were necessary. A farmer could do a day's work in the field, take care of his stock and shine his new shoes and get there without planning a week ahead for the event. It gives us a chance to get acquainted in a way that is not possible during working hours. The man who cannot have a good time in his own neighborhood, or in his own house, will not get much fun out of life. More neighborhood picnics will help to develop a good community spirit in many farming sections.—K.

FARMERS HEAR GRANGE MASTERS

The Pomona Grange and County Farm Bureau make a big combination for a picnic in New York State. Nearly every farmer is a member of one or both of these organizations. Midsummer gatherings of farmers have been held in a large number of counties this season, but the annual picnic of the Monroe County Grange and Farm Bureau held at Industry recently, is worthy of special mention because Monroe is the leading Grange county in New York state and the Farm Bureau is very strong. It was attended by upwards of 3 000 persons.

State Grange Master Sherman J. Lowell told the farmers that they would never get anywhere as individuals; that they have got to work together if they secure their demands. They are going to have a fair profit for the food they produce or take a summer vacation. And if this time comes the people of the cities are going to wake up to the fact that the farmers are of some importance.

Charles M. Gardner of Springfield, Mass., was the leading speaker. He spoke of the repeal of the daylight saving law as one of the achievements of organized farmers of which the grange with its 800,000 members took a leading part. The power of the grange is going to be demonstrated as never before during the next six months. The time has come, he said, for us in the United States to find out whether a few noisy labor leaders or the people who make up the citizenship and pay the taxes are going to rule this country.

"The United States took a backward step," said Mr. Gardner, "when congress lay down and let the brotherhoods put the Adamson law over them. Our present labor troubles began with that act.

"It is true that big business is selfish, but the great mass of investors are honest men who have gotten their money honestly. The time has come when somebody has got to proclaim the gospel that it is still a fairly respectable thing to work. People are fearing that they will do more work than they are paid for. We are rearing a generation that thinks he is the best fellow who gets by with the least service rendered."

The speakers' assertion that if we have a universal eight hour day it must apply to farm folks and all housewives, met the unanimous approval of the crowd. It will double the cost of production, but what of that? He condemned the president for his attitude on the prohibition question, deplored the present reign of extravagance in private and public affairs, and said the next twenty-four months are going to shape the policies on which the next fifty years are going to stand.—E. E. R.

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You can always depend upon the Gulbransen for good dance music—the latest jazz songs, the old favorites. It offers a larger repertoire than any orchestra.

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In fact, a tiny baby once crept up to the Gulbransen and, so gently do the pedals operate, the baby played it just as shown in the picture at the right. That is where we got the idea for our trade mark.

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GULBRANSEN
(Pronounced Gul-BRAN-sen)
Player-Piano

KEZIAH COFFIN

By JOSEPH C. LINCOLN

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SYNOPSIS

Keziah Coffin is packing up to move from the house which she and her brother had occupied until his death. Grace Van Horne, Eben Hammond's ward, was assisting Keziah to gather and pack the household goods, and in the meantime discussing the prospective new minister who was due to arrive to take up his duties as pastor of the "Regular" Church, of which Keziah was a member. Eben Hammond was a "Come-Outer" and of course his ward was required to attend the same church. While they were discussing the merits and demerits of the two sects, Abishia Pepper, commonly called "Kyan" Pepper, arrived. Grace hid herself and Keziah sensing his errand at once asked him to take down the stovepipe.

◆

"Why, I'd be glad to, of course," he declared with dubious enthusiasm. "But I don't know's I'll have time. Perhaps I'd better come later and do it. Laviny, she—"

"Oh, Laviny can spare you for a few minutes, I guess; 'specially as she don't know you're out. Better take your coat off, hadn't you? Grace, fetch one of those chairs for Ky—for 'Bishy to stand in."

Grace obediently brought the chair. It happened to be the one with a rickety leg, but its owner was helping the reluctant Abishai remove the long-tailed blue coat which had been his wedding garment and had adorned his person on occasions of ceremony ever since. She did not notice the chair.

"It's real good of you to offer to help," she said. "Grace and I didn't hardly dast to try it alone. That pipe's been up so long that I wouldn't wonder if 'twas chock-full of soot. If you're careful, though, I don't believe you'll get any on you. Never mind the floor; I'm goin' to wash that before I leave."

Reluctantly, slowly, the unwilling Mr. Pepper suffered himself to be led to the chair. He mounted it and gingerly took hold of the pipe.

"Better loosen it at the stove hole first," advised Keziah. "What was it you wanted to see me about, 'Bish?"

"Oh, nothin', nothin'," was the hasty response. "Nothin of any account—that is to say—"

He turned redder than ever and wrenched at the pipe. It loosened at its lower end and the wires holding it in suspension shook.

"I guess," observed the lady of the houscе, "that you'd better move that chest of drawers out so's you can get behind it. Grace, you help me. There! that's better. Now move your chair."

Kyan stepped from the chair and moved the latter to a position between the high-boy and the wall. Then he remounted and gripped the pipe in the middle of its horizontal section.

"Seems to stick in the chimney there, don't it?" queried Keziah. "Wiggle it back and forth; that ought to loosen it. What was it you wanted to say, 'Bish?"

Apparently, Mr. Pepper had nothing to say. The crimson tide had reached his ears, which, always noticeable because of their size and spread, were now lit up like a schooner's sails at sunset. His hands trembled on the pipe.

"Nothin', nothin', I tell you," he faltered. "I—I just run in to say how d'ye do, that's all."

"Really, I think I'd better be going," said Grace, glancing from Kyan's embarrassed face to that of the unsuspecting Mrs. Coffin. "I'm afraid I'm in the way."

"No, no!" shouted the occupant of the chair. "No, no, you ain't!"

"But I'm afraid I am. And they'll be expecting me at home. Aunt Keziah, I——"

"Don't be in such a hurry," interrupted Keziah. "Does stick in the chimney, don't it? Tell you what you can do, Grace; you can go in the woodshed and fetch the hammer that's in the table drawer. Hurry up, that's a good girl."

Kyan protested that he did not need the hammer, but his protest was unheeded. With one more glance at the couple, Grace departed from the kitchen, biting her lips. She shut the door carefully behind her. Mr. Pepper labored frantically with the pipe.

"No use to shake it any more till you get the hammer," advised Keziah. "Might's well talk while you're waitin'. What was it you wanted to tell me?"

Abishai drew one hand across his forehead, leaving a decorative smooch of blacking on his perspiring countenance. He choked, swallowed, and then, with a look at the closed door, seemed to reach a desperate resolve.

"Keziah," he whispered hurriedly, "you've known me quite a spell, ain't you?"

"Known you? Known you ever since you were born, pretty nigh. What of it?"

"Yes, yes. And I've known you, you know. Fact is, we've known each other."

"Hear the man! Land sakes! don't everybody in Trumet know everybody else? What are you drivin' at?"

"Keziah, you're a single woman."

His companion let go of the chair, which she had been holding in place, and stepped back.

"I'm a single woman?" she repeated sharply. "What do you mean by that? Did—did anybody say I wasn't?"

"No, no! 'Course not. But you're a widow, so you be single, you know, and—"

"Well? Did you think I was twins? Get down off there this minute. You've gone crazy. I thought so when I saw that beaver. Either that or you've been drinkin'. Grace! What does make her so long gettin' that hammer?"

Finding the hammer did seem to take a long time. There was no sound from the kitchen. Kyan, steadying himself with one hand on the pipe, waved the other wildly.

"S-s-sh! s-sh-h!" he hissed. "Hush! be still! Don't get her in here. Keziah, you're single and so am I. You ain't got nobody to take care of you and I ain't, neither—that is, I don't want to be took care of—I mean, I've been took care of too much."

Mrs. Coffin took another step in the direction of the kitchen.

"He is loony!" she exclaimed under her breath. "I—"

"No, no! I ain't loony. I want to make a proposal to you. I want to see if you won't marry me. I'm sick of Laviny. Let's you and me settle down together. I could have some peace then. And I think a whole lot of you, too," he added, apparently as an afterthought.

Keziah's face was red now, and growing redder every instant.

"Kyan Pepper!" she cried in amazed incredulity. "Kyan Pepper, do you—"

"Hurry up!" pleaded Abishai, in agitated impatience. "Say yes quick. She'll be back in a minute."

"Say yes! Why, you—"

"Don't stop to argue, Keziah. I've got 'most fifteen hundred dollars in the bank. Laviny keeps the pass book in her bureau, but you could get it from her. I own my house. I'm a man of good character. You're poor, but I don't let that stand in the way. Anyhow, you're a first-rate housekeeper. And I really do think an awful lot of you."

Mrs. Coffin stepped no farther in the direction of the kitchen. Instead, she strode toward the rickety chair and its occupant. Kyan grasped the pipe with both hands.

"You poor—miserable—impudent —" began the lady.

"Why, Keziah, don't you want to?" He spoke as if the possibility of a refusal had never entered his mind. "I cal'lated you'd be glad. You wouldn't have to go away then, nor— My soul and body! some one's knockin' at the door! And this dummed pipe's fetched loose!"

The last sentence was a smothered shriek. Keziah heeded not. Neither did she heed the knock at the door. Her hands were opening and closing convulsively.

"Be glad," she repeated. "Glad to marry a good-for-nothin' sand-peep like you! Your sassy—Get down off that chair and out of this house! Get down this minute!"

"I can't! This stovepipe's loose, I tell you! Be reason'ble, Keziah. Do —don't you touch me! I'll fall if you do. Pl-e-ase. Keziah!— O Lordy! I knew it! Laviny!"

The door opened. On the threshold, arms akimbo and lips set tight, stood Lavinia Pepper. Her brother's knees gave way; in their collapse they struck the chair back; the rickety leg wabbled. Kyan grasped at the pipe to save himself and, the next moment, chair, sections of stovepipe, and Mr. Pepper disappeared with a mighty crash behind the high-boy. A cloud of soot arose and obscured the view.

Keziah, too indignant even to laugh, glared at the wreck. In the doorway of the kitchen Grace Van Horne, hammer in hand, leaned against the jamb, her handkerchief at her mouth and tears in her eyes. Lavinia, majestic and rigid, dominated the scene. From behind the high-boy came coughs, sneezes, and emphatic ejaculations.

Miss Pepper was the first to speak.

"Abishai Pepper," she commanded, "come out of that this minute."

Her answer was a tremendous sneeze. Then from the dusky cloud by the wall sounded a voice feebly protesting.

"Now Laviny," began poor Kyan. "I never in my life——"

"Do you hear me? Come out of that!"

There was a sound of scrambling. More soot floated in the air Then around the corner of the high-boy appeared Mr. Pepper, crawling on his hands and knees. His hair was streaked with black; his shirt front and collar and shirt sleeves were spotted and smeared with black; and from his blackened cheeks his red whiskers flamed like the last glowing embers in a fire-scarred ruin.

"Laviny," he panted, "I never was so surprised and upsot in all my life afore."

This was too much for Grace. She collapsed in a chair and laughed hysterically. Even the wrathful Keziah smiled. But Lavinia did not smile. For that matter, neither did her brother.

"Hum!" sneered Miss Pepper. "Upsot! Yes, I see you're upsot. Get up, and try to look as much like a Christian as you can!"

Kyan rose from his knees to his feet and rubbed his back. He glanced reproachfully at Grace, then fearfully at his sister.

"I was just tryin' to help Keziah take down her stovepipe," he explained. "You see, she didn't have no man to——"

"Yes, I see. Well, I judge you got it down. Now you go out to the sink and wash your face. Heavens and earth! Look at them clothes!"

"I do hope you didn't hurt yourself, Abishai," said the sympathetic Keziah. Then, as remembrance of what had led to the upset came to her, she added: "Though I will say 'twas your own fault and nobody else's."

Lavinia whirled on her.

"His own fault, was it?" she repeated, her voice shrill and trembling. "Thank you very much, marm. I cal'late 'twas his own fault comin' here, too, wa'n't it? Nobody led him on, I s'pose. Nobody put him up to riggin' out in his best bib and tucker and sneakin' here the minute I was out of the house. No, nobody did! Of course not!"

"No, nobody did," said Keziah briskly. "And you may know what you're hintin' at, but I don't."

"Dear me! Ain't we innocent! We've got plenty of money, we have. Widowers with property ain't no attraction to us. Everybody knows that —oh, yes! And they never talk of such a thing—oh, no! Folks don't say that—that— Well," with a snarl in the direction of the kitchen, "are you anywheres nigh clean yet? Get your coat and hat on and come home with me."

She jerked her brother into the blue coat; jammed the tall hat down upon her head, and, seizing him by the arm, stalked to the door.

"Good day, marm," she said. "I do hope the next widower you get to take down your stovepipe—yes, indeed! ha! ha!—I hope you'll have better luck with him. Though I don't know who 'twould be; there ain't no more idots in town that I know of. Good day, and thank you kindly for your attentions to our family."

She pulled the door open and was on the step; but Mrs. Coffin did not intend to let her go in just that way.

"Laviny Pepper," she declared, her eyes snapping, "I don't know what you're talkin' about, but if you dare to mean that I want any of your money, or your brother's money, you're mistaken—'cause I don't. And I don't want your brother either —Lord help him, poor thing! And I tell you right now that there's nobody that does; though some kind-hearted folks have said 'twould be a Christian act to poison him, so's to put him out of his misery. There! Good mornin' to you"

She slammed the door. Lavinia was speechless. As for her brother, but one remark of his reached Grace, who was watching from the window.

"Laviny," pleaded Kyan, "just let me explain."

At nine o'clock that night he was still "explaining."

Keziah turned from the door she had closed behind her visitor.

"Well!" she ejaculated. "Well!"

Her friend did not look at her. She was still gazing out of the window. Occasionally she seemed to choke.

Keziah eyed her suspiciously.

"Humph!" she mused. "'Twas funny, wasn't it?"

"Oh, dreadfully!" was the hurried answer.

"Yes. Seems to me you took an awful long time findin' that hammer."

"It was away back in the drawer. I didn't see it at first."

"Hum! Grace Van Horne, if I thought you heard what that—that thing said to me, I'd—I'd—Good land of mercy! somebody else is comin'."

Steps, measured, dignified steps, sounded on the walk. From without came a "Hum-ha!" a portentous combination of cough and grunt. Grace dodged back from the window and hastily began donning her hat and jacket.

"It's Cap'n Elkanah," she whispered. "I must go. This seems to be your busy morning, Aunt Keziah. I"—here she choked again—"really, I didn't know you were so popular."

Keziah opened the door. Captain Elkanah Daniels, prosperous, pompous, and unbending, crossed the threshold. Richest man in the village, retired shipowner, pillar of the Regular church and leading member of its parish committee, Captain Elkanah looked the part. He removed his hat, cleared his throat behind his black stock, and spoke with impressive deliberation.

"Good morning, Keziah. Ah-er-morning, Grace" Even in the tone given to a perfunctory salutation like this, the captain differentiated between Regular and Come-Outer. "Keziah, I—hum, ha!—rather expected to find you alone"

"I was just going, Ca'pn Daniels," explained the girl. The captain bowed and continued.

"Keziah," he said, "Keziah, I came to see you on a somewhat important matter. I have a proposal I wish to make you."

He must have been surprised at the effect of his words. Keziah's face was a picture, a crimson picture of paralyzed amazement. As for Miss Van Horne, that young lady gave vent to what her friend described afterwards as a "squeal," and bolted out of the door and into the grateful seclusion of the fog.

CHAPTER II.

In Which Keziah Unearths a Prowler

The fog was cruel to the gossips of Trumet that day. Mrs. Didama Rogers, who lived all alone, except for the society of three cats, a canary, and a white poodle named "Bunch," in the little house next to Captain Elkanah's establishment, never entirely recovered from the chagrin and disappointment caused by that provoking mist. When one habitually hurries thru the morning's household duties in order to sit by the front window and note each passer-by, with various fascinating surmises as to his or her errand and the reasons for it, it is discouraging to be able to see only one's own front fence and a scant ten feet of sidewalk. And then to learn afterwards of a dozen most exciting events, each distinctly out of the ordinary, which might have been used as excuses for two dozen calls and as many sensations! As Captain Zeb Mayo, the irreverent ex-whaler, put it, "That fog shook Didama's faith in the judgment of Providence. 'Tain't the

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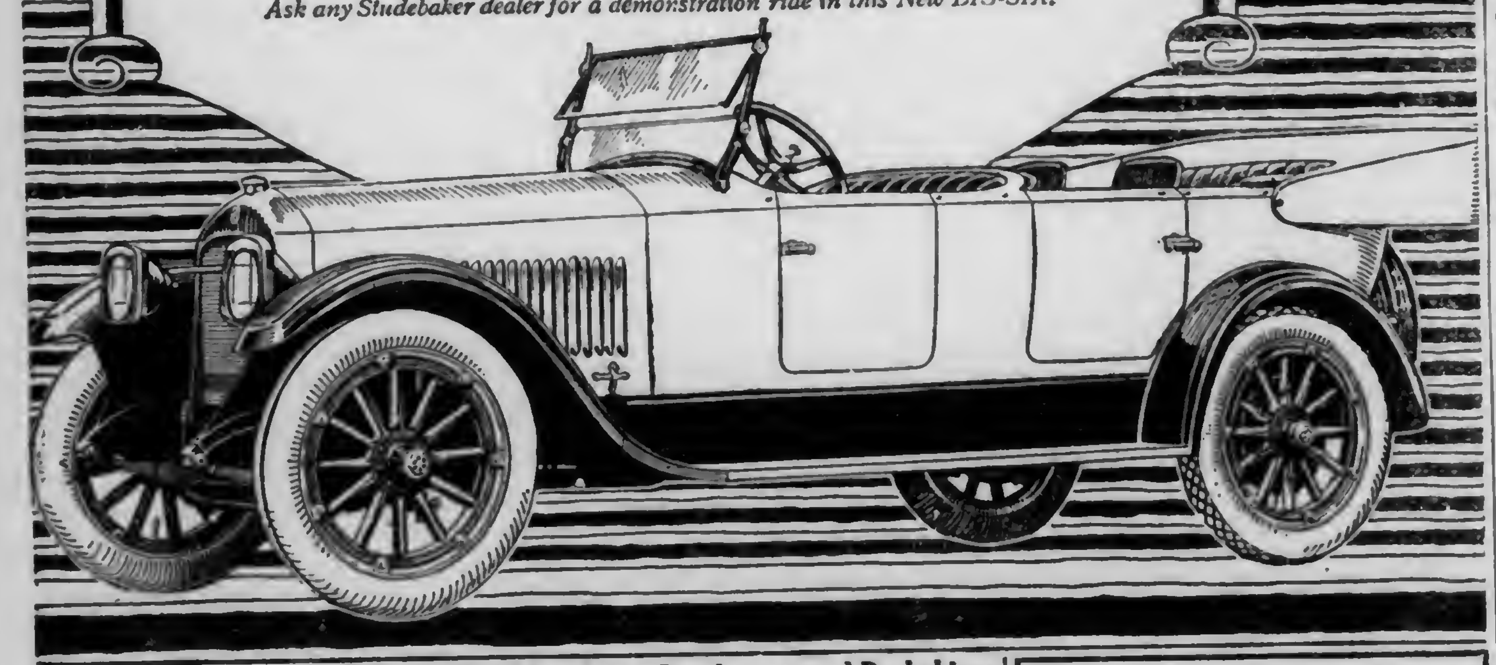

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'all wise,' but the 'all seein' ' kind she talks about in meetin' now."

The fog prevented Mrs. Rogers's noting the entrance of Mr. Pepper at the Coffin front gate. Also his exit, under sisterly arrest. It shut from her view the majestic approach of Captain Elkanah Daniels and Grace's flight, her face dimpled with smiles and breaking into laughter at frequent intervals. For a young lady, supposed to be a devout Come-Outer, to hurry along the main road, a handkerchief at her mouth and her eyes sparkling with fun, was a circumstance calculated to furnish material for enjoyable scandal. And Didama missed it.

Other happenings she missed, also. Not knowing of Captain Daniels's call upon Keziah, she was deprived of the pleasure of wonder at the length of his stay. She did not see him, in company with Mrs. Coffin, go down the road in the opposite direction from that taken by Grace. Nor their return and parting at the gate, two hours later. She did not see—but there! she saw nothing, absolutely nothing—except the scraggy spruce tree in her tiny front yard and the lonely ten feet of walk bordering it. No one traversed that section of walk except old Mrs. Tinker, who was collecting subscriptions for new hymn books for the Come-Outer chapel. And Didama was particularly anxious not to see her.

The dismal day dragged on. The silver-leaf trees dripped, the hedges were shining with moisture. Thru the stillness the distant surf along the "ocean side" of the Cape growled and moaned and the fog bell at the lighthouse clanged miserably. Along the walk opposite Didama's—the more popular side of the road—shadowy figures passed at long intervals, children going to and from school, people on errands to the store, and the like. It was three o'clock in the afternoon before a visitor came again to the Coffin front gate, entered the yard and rapped at the side door.

Keziah opened the door.

"Halloa!" she exclaimed. "Back, are you? I begun to think you'd been scared away for good."

Grace laughed at she entered.

"Well, auntie," she said, "I don't wonder you thought I was scared. Truly, I didn't think it was proper for me to stay. First Kyan and then Cap'n Elkanah, and both of them expressing their wishes to see you alone so—er—pointedly. I thought it was time for me to go. Surely, you give me credit for a little delicacy."

Keziah eyed her grimly.

"Humph!" she sniffed. "If you'd been a little less delicate about fetchin' that hammer, we might have been spared at least one smash-up. I don't s'pose Laviny'll ever speak to me again. Oh, dear! I guess likely I'll never get the memory of that—that Kyan thing out of my mind. I never was so set back in my born days. Yes, you can laugh!"

She laughed herself as she said it. As for Grace, it was sometime before that young lady became coherent.

"He did look so funny!" she gasped. "Hopping up and down on that shaky chair and holding on to that pipe and—and—O Aunt Keziah, if you could have seen your face when I opened that door!"

"Yes; well, I will say you was sometime gettin' it open. And then, on top of the whole fool business, in parades Elkanah Daniels and——"

She paused. Her companion looked delightedly expectant.

(Continued Next Week.)

Veterinary

Conducted by W. C. Fair, V. S.

Advice thru this department is free to our subscribers. Each communication should state history and symptoms of the case in full; also the name and address of writer. Initials only will be published. We cannot make reply by mail. This is one of the most valuable columns of the paper and we invite readers to make use of it. Clippings from this column, when properly preserved and classified, make one of the most valuable medical symposiums a farmer-stockman can obtain.

Hock Lameness.—I have a driving horse that is lame in left hind leg. His lameness began to be noticed some 3 or 4 months ago, and altho his hock joint swells some he does not change much. I have thought that rest was about as good a remedy as any, but he remains about the same. What line of treatment does he require? White Horse, Pa.—If you are sure that the lameness is in hock joint, apply equal parts turpentine, aqua ammonia and raw linseed oil to hock three times a week. Remember if you continue working him, his recovery will be doubtful.

Out of Condition.—Indigestion.—Six-year-old mare is thin, coat rough and hair dry and lifeless. I feed her corn, bran and hay; she runs on good bluegrass. J. A. W., Coal Dale, Pa.—Give her 30 drops fluid extract nux vomica, ½ ounce tincture cinchona, 3 drams Fowler's solution at dose 3 times a day and some oats twice daily.

Ringbone.—Work horse has ringbone at top of hoof. H. H. J., Sandusky, O.—I believe such cases are slightly relieved by shoeing with rolling motion shoe and keeping the heel some higher than toe.

Paralysis of Tail.—My 7-year-old cow seems to have lost use of tail. She came fresh 3 weeks ago, was apparently all right up to 2 weeks ago; has not been injured that I know of. She runs in good pasture and is a deep milker. J. E. H., Clarion, Pa.—Doubtless she met with an injury, perhaps one of the bones of tail high up has been fractured. It is very doubtful if anything can be done to remedy her ailment. If a vertebra is displaced, it is possible to put it back to its former position. Have a competent veterinarian examine her.

Nasal Catarrh.—My shotes, 100 lbs. or better in weight, discharge mucus from nose, eyes swell shut, cough some, lie about in a sleepy condition, stagger when they walk, do not eat, but none of them have yet died. D. W. K., Espy, Pa.—Your shotes show symptoms of nasal catarrh. Give each one a moderate dose of castor oil to move their bowels, wash out nostrils with salt and water, 1 teaspoonful to a pint. Give equal parts bicarbonate of soda and powdered gentian, 15 or 20 grains of each is the right dose, and this medicine should be given 2 or 3 times a day. The pigs should be kept dry and in a clean place.

Ducks Lame.—Little ducks are lame. H. B., Vineland, N. J.—I imagine that your young ducks have been kept in an unclean and too damp a place. Perhaps they roost in a draft. An ailment of this kind is generally preventable, but not curable.

Chronic Chorea.—Our 8-month-old dog jerks very badly, worse when lying down, the left fore leg seems to be weak and altho he runs and plays and apparently feels good, has splendid appetite, but fails to get well. Tell me what to do for him. A. G. B., Sandy Spring, Md.—This is a nervous ailment in dogs that is generally incurable. Following distemper in dogs it is not unusual for chorea to develop and the dog seldom recovers. Give him 3 drops Fowler's solution at dose in feed 3 times a day. In my practice I invariably order the destruction of the dog that shows parallel symptoms to yours.

White Diarrhea in Chicks.—Can you tell me a cure for white diarrhea in little chicks. I feed cornmeal mash, chick feed, gravel, sand, wheat and cracked corn. H. L., Parkers Landing, Pa.—The best means to prevent and combat white diarrhea is thru the use of sour skimmilk. Feed should be kept from the chicks for 48 to 72 hours after hatching, except the milk, which can be given after the first day. The continued feeding of this sour milk almost always circumvents this disease.

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TRAVELER TIRES

—The Tires with the NEW IDEA

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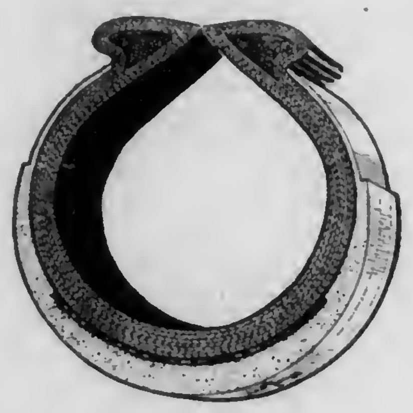

FIGURE 1. An ordinary tire (round inside and out) uninflated. When inflated it expands in all directions and is practically the same shape only larger.

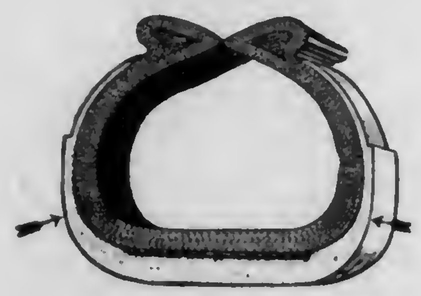

FIGURE 2. An ordinary tire inflated with the weight of the car on it. It is compressed at the tread, squeezing the inner cushion stock--the life of the tire---and it runs as shown in the illustration---strained, rubbing, wearing. The arrow shows where the great constant strain is.

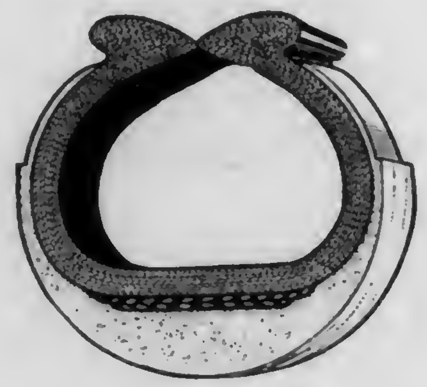

FIGURE 3. Cross section of a Traveler Tire uninflated. Due to the thick, rugged tread and the flat inner shape when air is pumped in, it elongates. When the weight of the car is put on it, the weight equalizes the air pressure and the tire reverts to the above position. The Traveler is built ORIGINALLY in the shape all tires run. This eliminates strain and therefore wear.

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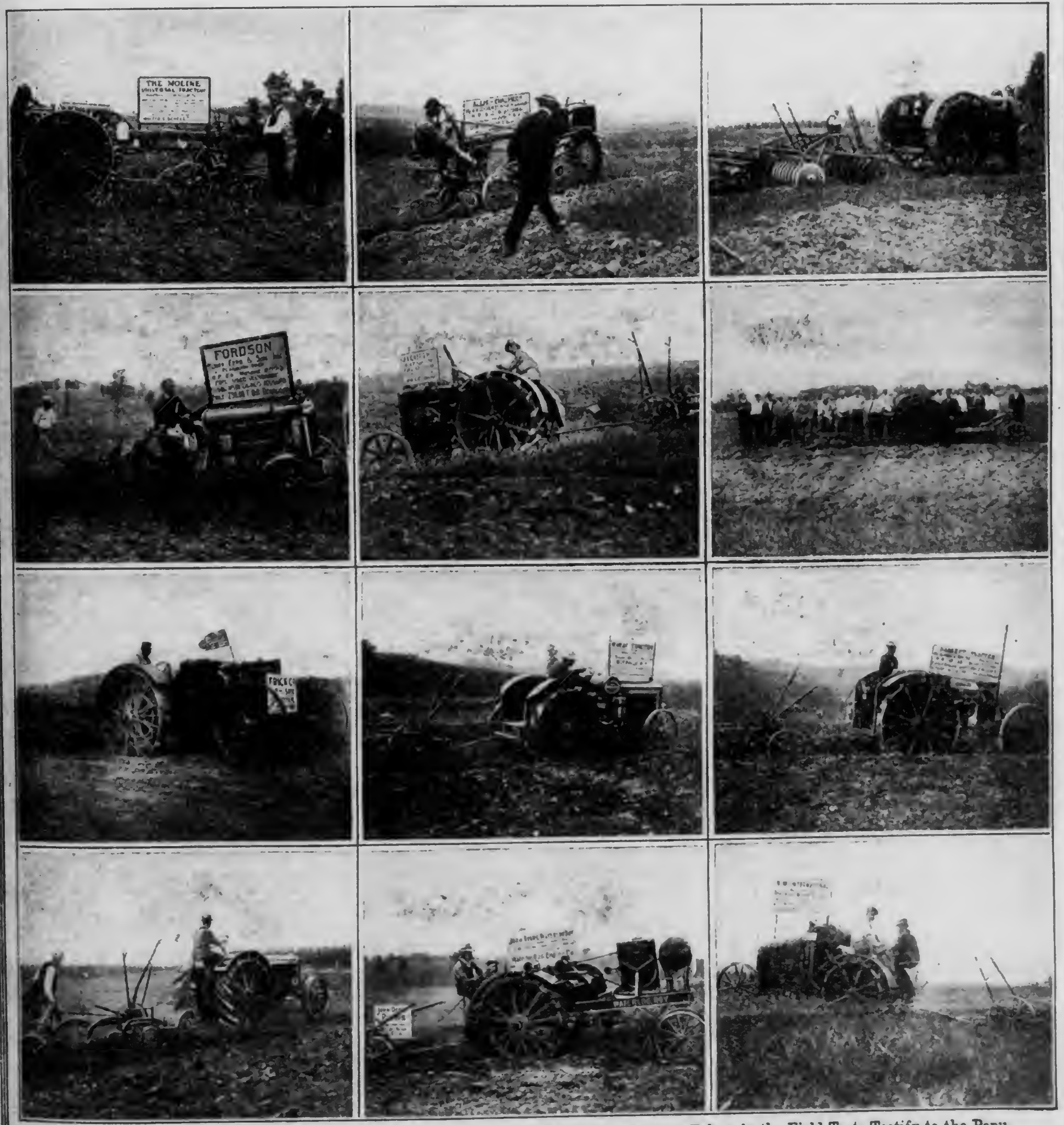
Volume 46 PHILADELPHIA, PA., SATURDAY, SEPTEMBER 20, 1919. Number 12



The Large Attendance of Farmers at Tractor Demonstrations, and the Critical Interest Taken in the Field Tests Testify to the Popularity of Tractors as Farm Power

Photos Taken at the Tractor Demonstration Held at Harrisburg, Pa., August 12-13, 1919.

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The Tractor on Eastern Farms

A Study of Tractor Operation on Fifty-four Farms in Southeastern Pennsylvania

An economic study of tractors was made last summer by the Division of Farm Management of the Pennsylvania State College. The object of the study was to secure data as to the actual cost of tractor operation under farm conditions and to study the conditions that affect the cost of operation.

Description of Farms Studied.—The survey was conducted in central and southeastern Pennsylvania. The farms studied had an average of 123 acres of crops, or nearly twice as many as the average farm for the region studied. The size varied from 41 to 278 acres of crops. The type of farming was largely general. The topography varied from level to hilly. The soil was a rather heavy loam. On several of the farms there were rock outcrops that were a more or less serious menace to plowing.

Cost and Life of Tractor.—The average cost of the 54 tractors was $959. There was a wide variation in the cost of different makes of the same horsepower, due to a difference in quality. There was also a wide variation in the cost of the same make and horsepower due to the general increase in prices. The average value of the 54 tractors was $794. This represents the average investment for the year studied. The average estimated life of the tractor was 8.1 years. The range of the estimates was 3 to 15 years. The average tractor had been used 1.5 years. None in the study had been used more than 4 years.

Cost of Operation

The cost of operating the tractor was considered under three headings, fuel cost, labor cost, and overhead or other cost.

Fuel.—The average fuel cost for all tractors was $2.36 for each 10-hour day. The fuel cost for the gasoline tractors was $3.32 per ten-hour day and $2.06 for kerosene tractors. The approximate cost was $.12 for kerosene and $.25 for gasoline. In starting the kerosene tractors about $.02 worth of gasoline was consumed per day. The fuel was delivered to the farm in all but four cases.

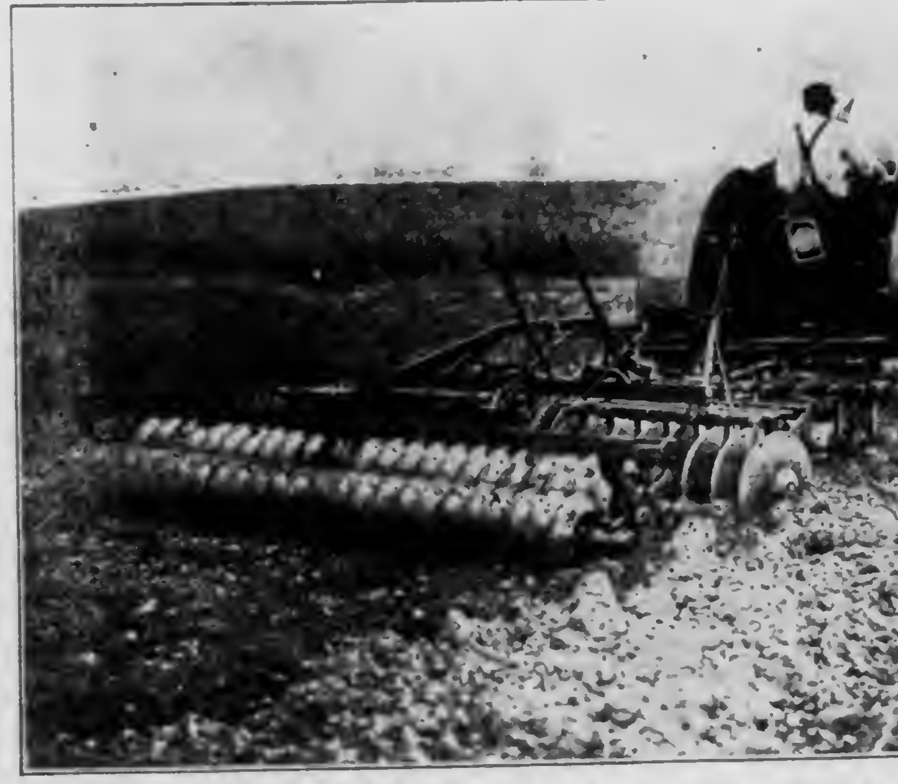
Labor.—The operator's labor was estimated to be worth $.25 per hour. The average cost of operating the tractor 50.6 days was $126.48. The amount of work done by the tractor varied from 15.3 days to 117.8 days. For each ten-hour day, one hour was consumed in filling with fuel and water, oiling and adjusting, and nine hours in actual work. The kind of work done is shown in the following table. About 40 percent of the total work was belt work. This is probably above the usual demands of the eastern farmer. In addition to the wood sawing and feed grinding found on most eastern farms, these farms had an abundance of corn stalks to cut or shred and in many cases owned a small thresher.

By D. S. FOX

Farm Management Dept. Penna. State College

Table 1. Kind and amount of work done per tractor, 54 farms—Penna.—1917-18.

Kind of Work		Average days work
Tractor work—Home		
	Plowing	11.2
	Harrowing	8.8
	Hay making	2.3
	Manure hauling	1.4
	Pulling binder	1.3
	Other work	2.6
Tractor work—Custom		
	Plowing	1.6
	Harrowing	.5
	Other work	1.3
Belt work—Home		
	Threshing	2.3
	Silo filling	2.7
	Wood sawing	2.0
	Feed grinding	3.0
	Shredding	2.3
	Other work	1.7
Belt work—Custom		
	Threshing	1.3
	Silo filling	1.0
	Wood sawing	3
	Shredding	.4
	Baling	.9
	Other work	1.7
Total tractor work		31.0
Total belt work		19.6
Total custom work		9.0
Total work		50.6



Double Disking and Multi-Packing Wheat Ground

Overhead.—The overhead cost includes all other costs such as repairs, oil, labor, interest, depreciation and use of buildings. The item for repairs was small on most farms as the tractors were new. Repairs costing $100 or more were reported on four farms. The highest was $150. The average cost of repairs was $24.36.

All farmers used cylinder oil and hard oil, and many used a heavy oil for the gears. The average tractor used 54.4 gallons of cylinder oil or a little over one gallon per day. The average cost of oil per tractor was $28.55, or $.56 per day.

The item for labor included all extra work on the tractor in overhauling, making repairs, storing or hauling fuel. The average cost of man labor was $9.34. Interest was charged at 5 percent on the average value of the tractor. The average charge for interest was $39.72.

The average life of the tractors was 8.1 years. The depreciation using this life and a junk value of 5 percent was computed by the compound interest law with a decreasing function. The depreciation thus secured averaged $269.10.

An estimate was made by the farmer of the value of the building or position of the building used by the tractor. A rental charge of 10 percent was made on the value. The average cost per tractor was $4.83. The total overhead cost per tractor was $376.20. The following table gives a summary of the costs and the total cost.

Table 2.—Summary of cost of operation per tractor—54 farms Penna.—1917-18.

Item	Av. cost per tractor
Fuel	$119.44
Labor—operating	126.48
Repairs	24.36
Oil	28.85
Labor for repairs, etc.	9.34
Interest	39.72
Depreciation	269.10
Use of buildings	4.83
Total	$622.12
Cost per day	$12.30

Factors Affecting Cost of Operation

The limited number of records has not been sufficient to make a detailed study of tractor operation. The results are thus limited to a few general factors.

Size of Farm.—The tractor cost least on the largest farms. Small farmers not having sufficient work at home did the most custom work and thus reduced the cost. Unless custom work is done the farm should consist of at least 100 acres of crops.

Table 3.—Relation of size of farm to cost of tractor operation—54 farms—Penna., 1917-18.

Acres of crops	No. of farms	Days of work	Days of custom work	Cost per day
75 or less	13	42.9	17.1	$11.71
76—125	23	49.	7.1	13.17
126—200	13	56.9	5.7	12.20
Over 200	5	61.3	5.1	10.42

Amount of Work.—There was a direct relationship between the amount of work done and the cost of operation. There should be a possibility of at least 50 days of work for the tractor if one is to expect to equal the average cost of $12.30 per day.

Table 4.—Relation of days of work to cost of operation—54 farms—Penna. 1917-18.

Days of Work	No. of farms	Cost per day
30 or less	13	$19.97
31—50	18	12.77
51—70	11	11.87
Over 70	12	9.85

Size of Plow.—The statement has been made by the U. S. Department of Agriculture that the only reliable way to measure the capacity of tractors is by the number of plows hauled. Of the 54 farms, 19 pulled 2-bottom plows and 26 pulled 3-bottom pows. One farm did not plow with the tractor and the balance used both 2 and 3 bottoms. As the table shows the 3-bottom plows are somewhat more economical. However, these tractors were operated more days and this is probably the chief factor in determining the cost.

Table 5.—Relation of size of plow to cost of plowing.

Size of plow	No. of farm	Cost of tractor per acre	Cost of tractor plow per acre	Days of work
2 Bottoms	19	$2.57	$.67	48.2
3 Bottoms	26	2.04	.70	54.1
Ave. of all	53	2.33	.71	50.6

Summary

No single factor seemed to have the effect that the number of days the tractor was used had. The overhead cost did not vary in the same ratio as the amount of work done, hence, the cost of overhead per day is less on those farms doing the same work. The operator seemed to have some effect on the cost of operation. The cost per day was $12.82 for hired men, $12.16 for owner and $10.75 for owner's sons. The son took better care, as a repair bill of about one-half the average shows.

A final test of the tractor's efficiency is measured by the number of horses displaced. On the 52 farms that had been operated before buying the tractor, an average of 1.9 horses were disposed of.

Well Worth the Care Bestowed

Among N. Y. Farmers

The Season and the Crops

No one ever loved home and ownership better than I but somehow we are not always allowed to have the things we love. It has been my fate for years to be forced to travel. Often I think of the happiness of the farmer who has home, business and ownership all in one. What comfort there must be in home, what pleasure in business, and what pride in ownership. But perhaps the farmer might gain if he could see thru car windows for a year or two as I do. There is so much to be gained by observing what other people do and what conditions are in other places. I am led occasionally to tell of the practices and farming conditions as I see them, in the columns of Pennsylvania Farmer.

The Season

First, a word about the season and the crops. There seems to be a great difference of opinion. Some say this year has been excellent and others claim it has been very hard to manage under prevailing weather. So far as New York state is concerned, the season has played its favorites. In early spring we had continuous rains with clear weather following until about the middle of July when certain localities received enough rain for an entire growing season and other received hardly any. Now, however, every one seems pretty well supplied with moisture and the ground is well loosened up for late summer and fall plowing. But what about the seasons result? What about the crops? Let's discuss them briefly.

Wheat.—Wheat seems to have wintered well and most farmers had a good crop. Some are already threshing and the yields are generally good. No. 6 and Golden Chaff seem to be turning out better than other varieties. Spring Wheat is not so good. It generally does well in places where winter wheat is less profitable if planted in early spring, but this year not more than two farmers in ten the state over were able to get it in until late in May because of the heavy spring rains, and consequently it is not going to make any man rich.

Rye.—Rye has been good pretty much all over the state. I wish I had returns on some fields of Rosen rye which I have seen. To my way of thinking, this is a coming variety. It has long heads with big plump kernels. F. H. Lacey, Farm Bureau Agent of Duchess County, and myself visited a number of fields and shelled out individual heads and counted the kernels. They ran from 75 up to 90 kernels to a head. In the same neighborhood common rye shelled 30 and 40 kernels to a head. Some seem to think Pedigree is a better variety, but I would stake Rosen anywhere north of Central Jersey.

Oats.—Oats have had a hard year. Few were planted early and farmers who ordinarily count on 60 bushels to the acre have stands that indicate about 35 or 40 bushels. And my, what a wonderful crop of grasshoppers, especially in Western New York! I was forced to abandon my tests because these creatures had knawned off about half the crop and left it on the ground. They have never been taught to "eat what is set before them" and they eat one kernel off and then start on the next. But with all the hazards of the season, one may easily see that horse-mane or side oats are not a profitable type to grow here.

Barley.—Barley is a fairly good crop and farmers who sowed it have more protein in their barns for winter feeding than those who sowed oats. If there had been some way of knowing the season was going to be a late one, delayed by rains, farmers could have sowed barley instead of oats, but many didn't have the seed on hand. Barley has also done well in mixtures with Canada field peas.

Hay.—Hay has been a good crop and strange as it may seem many farmers are already disposing of the surplus of this crop at good prices. There are over four million acres of hay raised in New York and the average yield is about a ton and a quarter. The amount of lime used in the state of New York is approximately 150,000 tons. If one-third of this acreage of hay is planted every year, and this would seem about right because there are about a million acres of oats and 300,000 acres of wheat grown annually, there would be enough lime to make an application of about 230 pounds to the acre for each acre of hay planted. This is hardly a drop in the bucket. Increase this to 2,000 pounds to the acre and the yield of hay would almost double, to say nothing of the increases which would be secured from other crops. Clover has been good and there is an unusually good crop of second crop clover. I have never seen the prospects better for a crop of clover seed than they are this year.

Corn.—Corn looks uniform and good almost everywhere in the state; but already the weather is getting cold and many farmers in high altitudes are now (August 28) preparing to cut their corn for fodder or silage. New York can hardly boast of its field corn and the day is rapidly approaching when all corn raised in the state, except in the Northwestern part, the Hudson Valley and Long Island, will be cured for fodder or put into the silo. Certainly it is an uncertain crop and much more food nutrients can be raised of a good silage variety for silage purposes than of a field variety for husking. Incidentally, Luce's Favorite looks well and promises to make a good silage crop all over the state.

Potatoes.—The potato crop, the home of bugs and diseases, has done well this season and so have the bugs and diseases. Farmers on Long Island are preparing for the largest crop in history, but it is a little later than usual. In Northern and Western New York, individual fields look uniform but there is a great difference in the fields. In many cases the potatoes were slow to come up. The recent rains just at the setting period have improved prospects and the season bids well for a better than average crop.

Fruits and Vegetables

I haven't been thru the fruit section recently and have no first hand information, but I am told that the crop of apples is very moderate. Everywhere there is much interest in cider and there is no question but that much pretty good speculation will occur this fall. Early apples are bringing good prices and those who have fall apples will undoubtedly receive good prices for all grades. Field crops and vegetables have been good everywhere. Farmers seem to persist in growing beans in spite of poor yields and poor prices comparatively during the past five years. Cabbage is somewhat ragged but it is growing rapidly and promises well.

So, in spite of trying weather, conditions have been favorable but not without disappointments. There have been many lessons learned and farmers seem to have developed an inquiring mind to a greater extent during the past few years than ever before. Questions of practice are of more importance today and farmers are progressing beyond the "cut and dried" methods of fathers and grandfathers. They are adopting their farm practices to their individual farms and to weather conditions as nearly as they can predict them.—John H. Voorhees.

Take Care of The New Car

When a motor car is built the engine has run very little and the parts are fitted tight to make them fit snug when the roughness wears off. As a consequence, the car is very stiff, will not show much speed and the motor will not respond readily to the throttle. The car should be run very carefully for the first 1,000 miles at least. The speed should not exceed 30 miles an hour on high, 18 on second and 8 miles per hour on low, under any conditions. By following this limit of speed the various parts of the car have an opportunity to find their seat in relation to the other parts without strain; then, if you are inclined to speed, the car will be fairly free and no harm will result. To force a car for the first 1,000 miles puts an unusual strain on each part, which will result in premature injury. Don't race the engine when standing idle, nor trifle with it, nor do stunts with it, nor show it off to your friends. Handle the car carefully and always remember you have too much money tied up in the car to risk any harm to it. After the first 500 miles, drain the oil from the crankcase in order to remove the minute particles of metal which will accumulate incident to

the wearing off of rough spots on the pistons, bearings, etc., flush with kerosene or gasoline and put in new oil.

It seems to be the general impression that when a new car arrives the only thing to do is to put in some oil, gasoline and water and start out. Usually, everything about a new car is mechanically correct, but it needs careful attention for the first 1,000 miles. Oiling and greasing are perhaps the most important features. The car should be gone over carefully before using it; oil the magneto, fan, generator and starter and other working parts of the motor. Carefully look after the grease cups and keep them well filled and turned down. Make it a practice to re-grease everything at least every 150 miles, as this will help to loosen up the car. Adjust the oil level so as to permit more oil to reach the engine for the first 1,000 miles. The careful owner will either go over a new car when he gets it or have a competent mechanic do so to see that the valves, carburetor, make-and-break mechanism of the magneto, and the electric generator are all properly set and adjusted. This may appear to be unnecessary but in these days of enormous production, inspections at the factory may not be as thoro as they should be.

The bolts and nuts require careful attention after the car has run the first 500 miles. At the end of that time they will be seated properly and rattling will be prevented for a long time if they are carefully tightened. The instruction books supplied with the car should be thoroly studied and every detail mentioned therein should be attended to. If you are unable to give them attention yourself, have your dealer do it.

From time to time squeaks will develop in various parts of tho body and running gear, and if the car is greased regularly most of them will disappear.

Some cars will show a tendency to overheat when new. This is caused by friction in wearing off the rough parts of the motor. Give the motor plenty of oil and water and do not force it, and in time this trouble will cease.—Leonard F. Strickler.

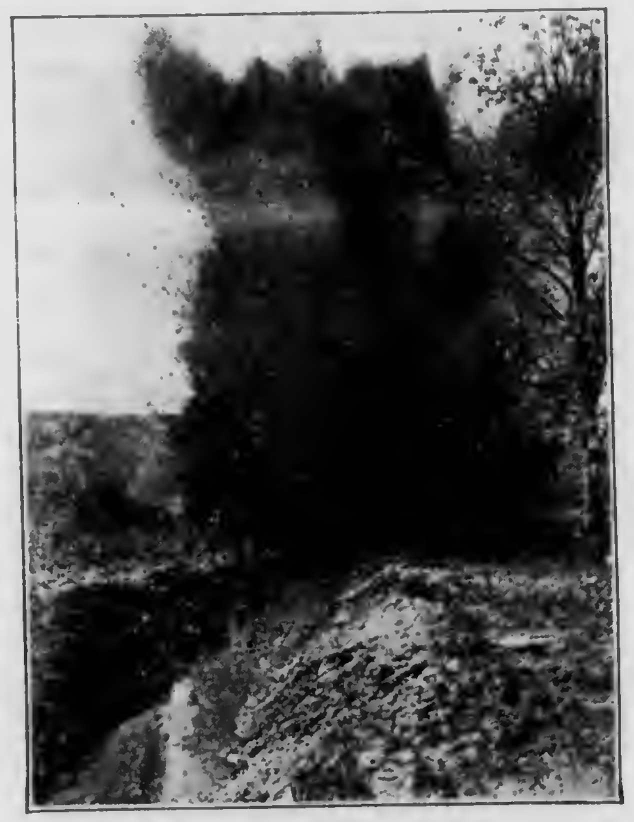
DITCHING BY THE USE OF DYNAMITE

Its Use on a Pennsylvania Farm Proves Its Value As a Power in Peace Times

There is a stream running thru our farm in Columbia County that has always been the source of more or less loss of valuable land. The course is winding and the lodging of ice and driftwood against the curves had caused the stream to break new channels across the adjoining fields. The result of this was an almost complete waste of about five acres of our best land. Besides being of no use this land grew up in brush and noxious weeds making an unsightly strip thru the farm.

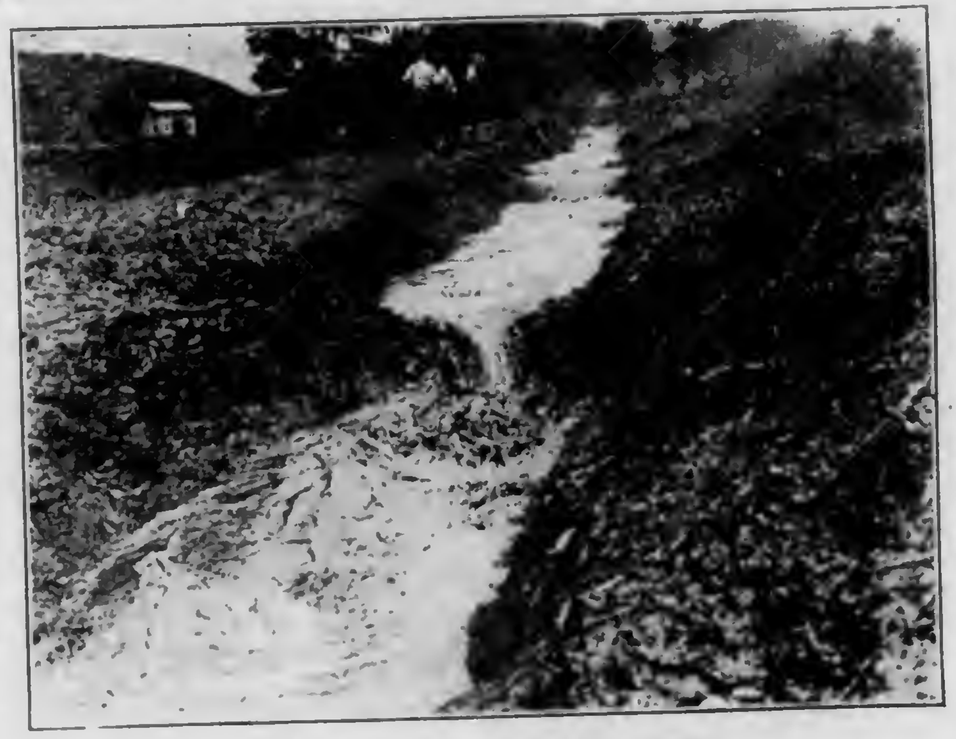
A careful survey of the situation led us to the conclusion that if we could straighten the course of the stream by cutting an entirely new channel for about 300 feet the difficulties of breaking over would be practically eliminated and the waste land reclaimed. This channel would have to be 12 feet wide and approximately five feet deep to carry the water when the stream was swollen. A part of the proposed course was made up of a gravel bar containing stones from the size of a mans' head down. The remainder was the natural soil formation of loam for about eighteen inches underlaid by a hard pan and gravel. At places there were roots and stumps of willow and alder and a section was within fifteen feet of an old hickory tree. These conditions would have made work with plow, scraper and shovel extremely difficult and tedious.

With labor scarce and high priced the solution of this problem seemed almost beyond us until we began to look into the possibilities of dynamite. We outlined the conditions to the Agricultural Department of one of the large powder companies and they sent a man to look over the proposition and give an estimate. The powder expert said the job could be done by explosives and advised the use of a special 50 percent nitroglycerin, nitrate of ammonia dynamite.

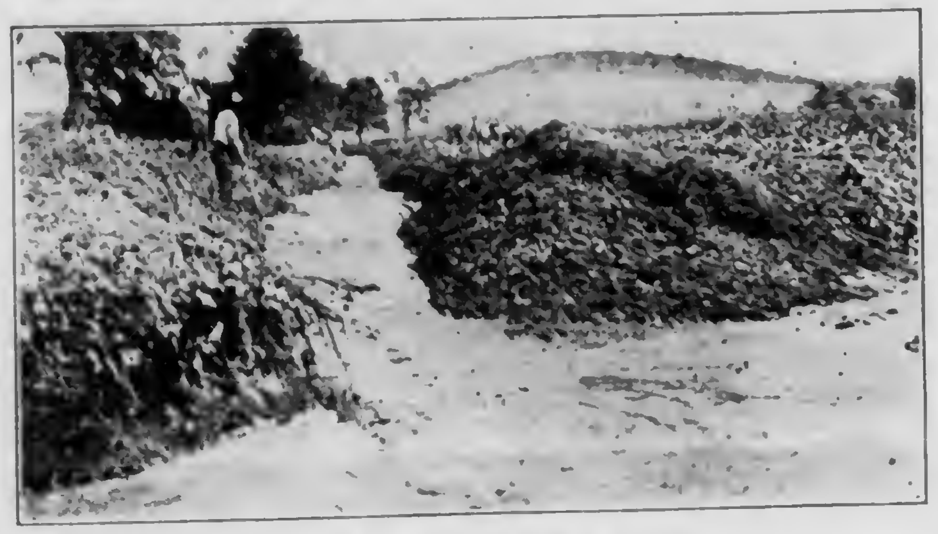


Blasting a Section of Ditch

This was a typical creek problem in Columbia County and we suggested to the Farm Bureau that it be made a demonstration. This was approved by the Executive Committee and the County Agent sent out letters inviting all farmers who were interested to be present. The work was done under the direction of a representative of the powder company, assisted by several young men in training for agricultural work with explosives.



The Current Washes Out Loose Dirt



The Finished Channel

The electric method of firing was used and the powder company furnished the battery. Over a hundred farmers were present at the demonstration.

The line of the proposed new channel was staked off and a furrow drawn thru the sod on either side to avoid ragged edges in the finished cut. Holes were then sunk with 1¼ inch steel bars to within six inches of the required depth of the ditch. These were placed 30 inches apart and loaded with two and one-half pounds each of dynamite. The water table came to within about two feet of the surface at this place and these charges were all surrounded by water. Some mud was also put back for tamping. This is a desirable condition for work of this sort because water has practically no elasticity. The waterlogged subsoil was thrown out much better than it would have been had it been dry. Twenty to thirty holes were fired at one time with the battery. The pictures show the nature of the work done.

The results were highly satisfactory to us in every way. The channel was completed entirely by the explosives. No work was needed by scraper or shovel. When the last charge was set off the stream entered the new course and the force of the current cleared out all the loose dirt. Roots and stones proved to be no barrier whatever. The material blown out practically all fell on the banks within ten feet of the edges and served to strengthen them. The stream is gradually improving the channel so that it will, in the course of a few weeks, be practically the same as that of the creek thruout its course.

Readers we know will be interested in the relative cost of the method as compared with hand work. It is somewhat difficult to estimate accurately a job of this sort. We asked two contractors to give us their opinion on the cost by team and scraper. One made a flat estimate of $300, and the other said one dollar per cubic yard for all dirt removed which would have been considerably higher. The cost of the operation by the dynamite method was $71.93 for dynamite and electric exploders and $23.75 for the labor of putting down the holes and loading. The battery and connecting wire were loaned by the powder company. This included, beside the major operation, the removal of a large walnut tree and the opening of 75 feet of a small ditch about three feet wide.

The representative of the powder company in charge explained to the farmers present the proper method of handling explosives and assured them that there was practically no danger in their use if directions were followed. He told them that as a result of years of careful study and experiment an explosive has been developed for every special need and that the possibilities in agricultural work have barely been touched.

All who saw the work done agreed with us that it represented a great saving of time and labor and was done better and with no greater danger to those engaged than had we used teams and scrapers.—C. G. McBride, State College, Pa.

NEW ASSISTANT SECRETARY

The new assistant secretary of agriculture, James R. Riggs, whose nomination has just been confirmed by the Senate, is a farmer—not merely by way of interest in the subject but by life-long, practical application. Farming has been his primary occupation all his life. More than that, he is a farmer by heredity. So far as the available record shows, the Riggs line from which he is descend- has been made up of farmers all the way. His grandfather, Hezekiah Riggs, was born on a farm in Loudon County, Virginia, in 1791. When he was 22 years old, he moved to Sullivan County, Indiana, and engaged in farming and live stock growing. There Commodore Perry Riggs, father of the Assistant Secretary, was born and there he spent his life as a farmer and stock grower. All of his sons and all of his sons' sons have been farmers.

Among the several sons of Commodore Perry Riggs was James R. Riggs. He was born at Shelburn, Sullivan County, Indiana, February 17, 1865. For two years after graduation from the Sullivan County High School, in 1882, he was deputy county treasurer and bookkeeper for hardware and lumber firms. Since then he has farmed.

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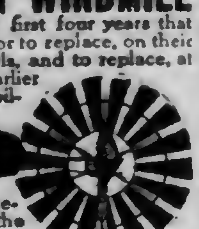

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DAIRY

CLEAN BEDS FOR COWS

The dairy cow must be kept clean to insure the production of healthful milk. With some types of stalls it is possible to place a two-by-three in front of the cow's hind feet to keep the straw that is clean from being forced into the gutter. This strip of wood helps to keep the bedding in place, and as it makes an uncomfortable place for an animal to lie, the cow will step forward and rest on the clean straw and thus keep out of the wet and dirty bedding near the gutter. This should be removed frequently to keep the stable as free from odors as possible.

It is economy to use plenty of clean straw in bedding the dairy cows, as everything that adds to their comfort is apt to increase the milk flow and the straw absorbs the liquid manure and increases the amount of fertility that can be returned to the soil. The farmer who sells half his straw stock and then scimps the cattle on bedding makes a mistake. Also the straw that is left over at the next harvest time would have been worth more as fertilizer if it had gone thru the stable. It pays to carefully estimate the amount of straw needed for the stock and then try and put it all thru the stables to increase its value as fertilizer.—R. G. K.

From Silo to Milk House—The Dairy Factory

FEED IN HALF THE TIME

Have you ever noticed the feeding utensils which different farmers use in feeding? There certainly is a great variety. There are old cans, basins, pans, boxes, shovels and so on. I have even seen cigar boxes used. Think of feeding a stableful of cattle with a cigar box. Yet the farmer is the one that is alwnys complaining that he has time for nothing but his work; that he is "too busy." It is remarkable, too, how long a person will stick to his old feeding "tin." It may have become worn out and full of holes, yet somehow, it has so endeared itself in the affections of the user that nothing short of total collapse can force him to secure something else with which to feed.

If your feed boxes are in the feed alley, and many barns have three or four such boxes, to feed in the shortest possible time and to take the fewest number of steps, do not place all the feed in one box. Put it in at least two and save steps in feeding every day. In this way you can feed over half your cows without taking one step from the feed, simply move along and empty it into their troughs. To feed the remaining half, use two feed containers so that you can feed two cows at the same time. If you do this, by taking two trips you have fed all the cows, eight or ten, in the stable.

As regards the feeding utensil itself. I like a six, eight or ten-quart bucket, larger preferred, because some cows need a large measure of feed at one meal. For the steers and beeves, a galvanized bushel basket is the thing. This requires few trips. I mention these because they measure the feed. If the feed is weighed once and the mixture kept the same, you know approximately how much you are feeding at each meal and can increase or dimish the feed as you please. Labor-saving and step-saving methods are marks of intelligence.—R. I. W., Lebanon Co., Pa.

SILAGE FROM LEGUMES

Probably the main reason why legumes have not been more widely used for silage is the fact that corn is grown successfully over the greater part of the country, and since this crop is preserved so successfully in the silo and produces large yields to the acre, there is little occasion for using any other crop. The most important factor in keeping alive the interest in putting legumes into the silo is the difficulty encountered in properly cutting the legumes into hay in regions of heavy rainfall. This difficulty is frequently encountered, especially with the first cutting of alfalfa and with soybeans and cowpeas.

Another advantage of preserving these crops in the silo is the greater economy in storage space. A ton of alfalfa hay requires about 500 cubic feet for storage, while in the form of silage the same material including the extra water is stored in less than 200 cubic feet. Certainly when conditions are such that legume crops may be cured into hay in a satisfactory manner, there is no special reason for putting the crop

into the silo, and there are good reasons why it should not be done.

The main objection to putting legumes into the silo is the labor required to handle a crop of this kind containing such a large proportion of water. During a season of normal rainfall, alfalfa at the usual stage of maturity as mowed for hay contains less than 25 pounds of dry matter in each 100 pounds. In each ton there is approximately 1,500 pounds of water and 500 pounds of dry matter. When alfalfa is cured into hay the amounts of water and dry matter are approximately reversed as compared with the green crop when cut. Each ton of cured hay as hauled to the barn or stack represents about three tons of the material at time of cutting. Again there are difficulties to be met in handling green forage, partly on account of the lack of special machinery suitable for the purpose. Furthermore, there is no evidence that the food nutrient in the form of alfalfa silage is used to any better advantage than in the form of hay.

DISTRIBUTING AND PACKING ENSILAGE

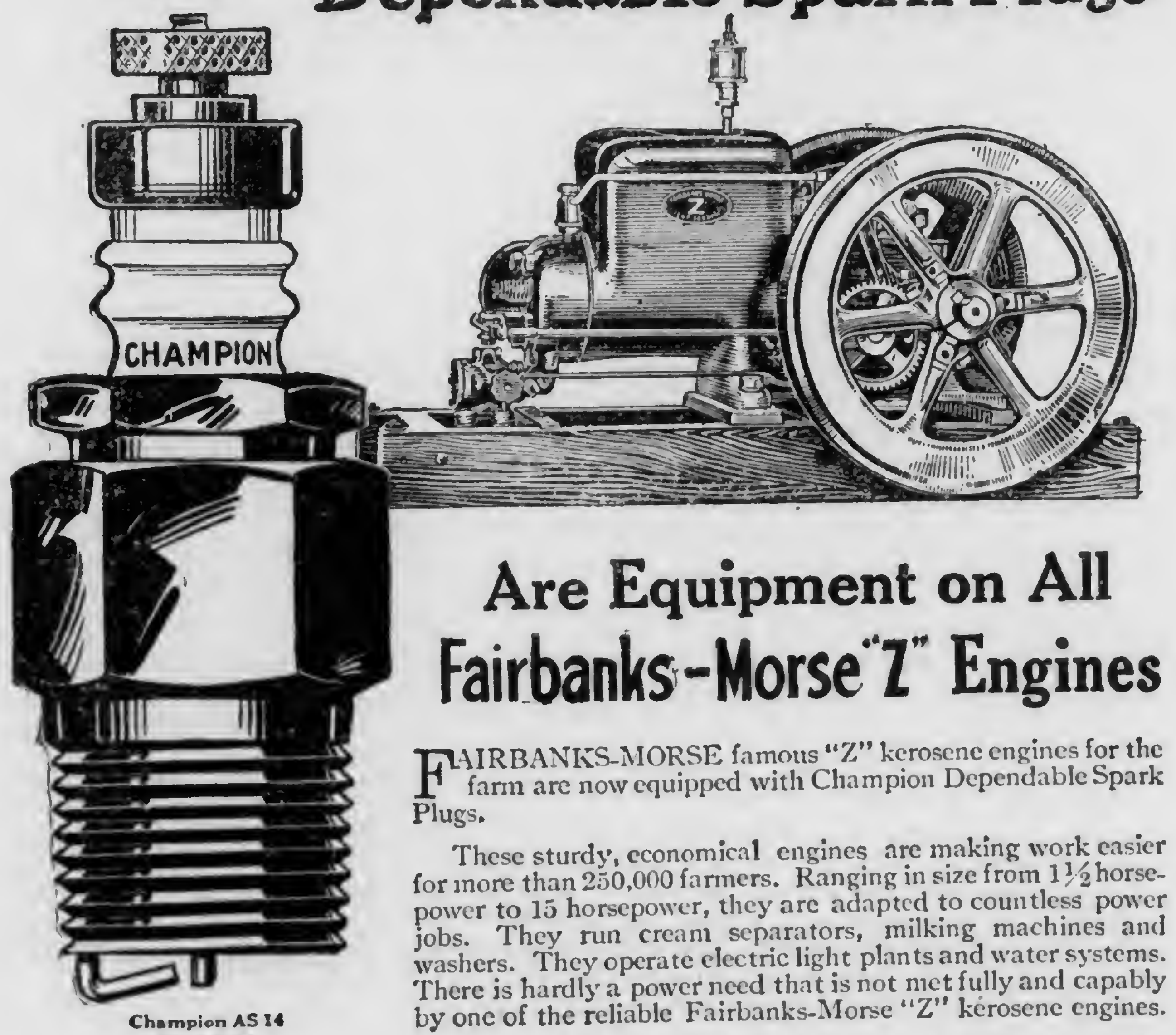
The packing of ensilage is very important. It assists both in quality and capacity. It is economy to use a jointed distributor, for with this all parts of the plant will be deposited together and at least one man in the silo can be dispensed with. The labor element alone will pay for a distributor in one season, but there is also a saving in that the distributor conveys the corn, leaves and stalks to any part of the silo desired and insures better keeping and packing. Give special attention to the tramping of the outside edge next to the wall. See to it that all unnecessary obstacles on the inside of the walls are removed.

The wall of the silo should be smooth and tight. A small block tacked against the wall of the silo will often spoil several bushels of ensilage by relieving the weight and pressure. Make the doors as tight as possible.

As the process of filling advances towards the top, packing will be more necessary than at the bottom and extra help can be applied at this time. If the silo is refilled it should be done before the top layer has spoiled. The greatest settling period will take place in from thirty-six to forty-eight hours after filling. Two or three days settling will be ample, but longer will do no harm. With large filling equipment, extra help should be used in tramping the silage.

Prevent Waste At Top

It is difficult to preserve all of the corn in a silo. As a rule a few inches on top will spoil. This can be greatly reduced by putting on the top some very green corn or cane. A small patch of corn where ears have been removed will answer fully as well, and sunflowers, weeds, or hay may also be used. Much care should be used in packing the top. Tramp thoroly over all surface and after it has gone thru the sweat for a couple of days, when top material is spongy and warm, tramp again, giving care to pack thoroly the edges. This will insure good keeping and prevent much loss at top. If silage is to be used immediately after filling, no spoiling is necessary for the silage can be taken out and fed during the process of fermentation. When spoiled silage is taken off the top it should be put where stock, especially horses, will not eat it.



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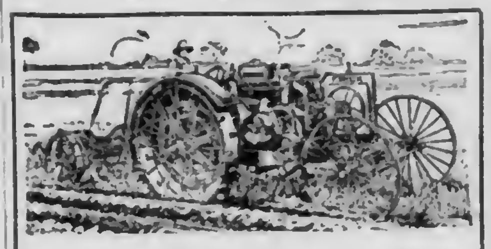

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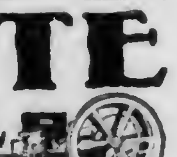

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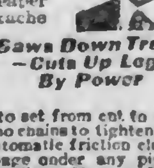

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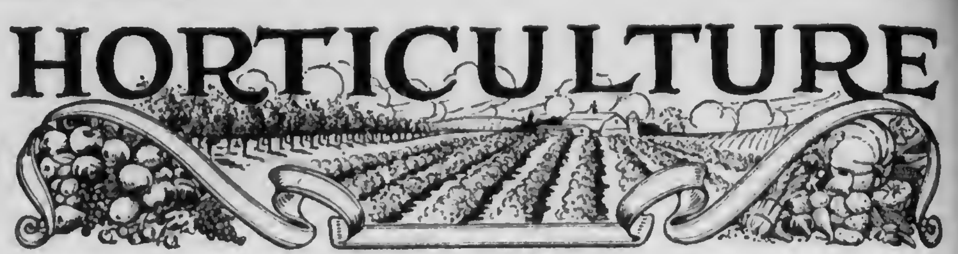

HORTICULTURE

Packing a Barrel of Apples

By J. P. STEWART.

In this year of Grace, a barrel of apples has become one of the valuable items of commerce if it is put up right, so that it behooves those who have them to pack to know how to do the job right. To the old hand at the game, this is a very simple process, but for the benefit of some of the more recent converts to the orchard industry we may outline the process briefly.

To begin at the real start, we may say that the first thing to do is to get the barrel. This can be done this year at about sixty cents each, plus freight, for good barrels. In this immediate connection it may be well to state that chestnut should be avoided as a material for apple barrels, especially for the ends, as it is too easily split. One car will carry from 350 to about 450 empty barrels, and about 150 to 200 after they are filled.

The next thing to do is to "cooper" the barrel, as it is called. In doing this, look at both ends and select the one with most pieces, or the one that is smoothest if the number of pieces is equal, to receive the stencil. Nail this end with at least four nails, 4-penny cut nails preferred. These nails should go thru the end hoop and catch the long tips of the two shortest pieces in the barrel head. Two more nails may be used if desired, but are seldom necessary. Then tighten the quarter hoops and put in two nails on opposite sides of each and clinch the nails. Then loosen the two hoops at the other end, knock in the head, put the loose hoops back in place and go on to the next barrel.

When this barrel is packed, place the loose ends beside it, insert a corrugated paper cap, and start "facing" the end that is down. This may be done in either one or two layers, the latter making the fancier pack. This consists in placing the apples around in a circle against the outer edge of the barrel, with the stems down, and continuing this circling until the whole bottom is covered. Each ring should be closed up completely by varying the size of the apples in it sufficiently to accomplish this result. In general, however, fruit of uniform size and color should be selected, so far as possible, so that when the barrel is opened no appreciable differences will be observable.

The barrel is then filled by running in the fruit carefully and shaking the barrel frequently so as to get it settled as much as possible. If this is done properly, the barrel will only need to be filled level full, or at most about a half an inch above the top, in order to make a tight pack. For the fanciest grades, an additional ringing is used at the "tail" of the barrel. This is done by placing the apples around on their sides so that the cheeks instead of the stems are exposed when this end is opened. This is best accomplished, with the aid of a circular two-inch plank, cut slightly smaller than the opening at the end of the barrel and known as the "follower." With it the jumbled fruit can be leveled off at any desired height, but usually about two inches below the top, and the final ringing can then be put in with least difficulty. Fruit packed in this way under an established brand, in which nothing but first-grade apples are used, has already brought a very fancy price in Philadelphia, or nearly fifty percent more by the carload than the other fruit was bringing on the same day.

After the head is pressed in place, the same nailing is required as that already described under "coopering" and head liners should be nailed in place in both ends, so as to catch the ends of all the head pieces. These head liners should be kept soaking in water before using to reduce danger of splitting.

In the stencilling, the information really required is the name of the variety, the grade and minimum size of the fruit, and the name and address of the packer or of the person in whose interest the packing is done. In addition to this, a neat and appropriate brand name is also desirable, if the fruit is really of a superior grade.

To be really fancy, the fruit should have no blemishes on it at all. One or two of the small russitted, circular, curculio marks which are only skin deep, may be permissible, but nothing larger or deeper. A single one of the small, dark curculio punctures that reaches some distance into the flesh, like a sting, rules the apple out of the first-grade class. Such fruit can be packed, but only under a lower grade, such as B, or under some entirely different letter, such as H.

After the barrel is packed, the correct position for it is on its side. This is especially true if it is to remain for any considerable time. Otherwise, the fruit is likely to settle and become slack at one end. The best practice, however, is to get the fruit into storage just as soon as possible after it is picked.

In grading and sizing the fruit, some kind of a table is essential. Where the crop is large enough, one of the mechanical graders is distinctly preferable. Some of these do the sizing by weight and others by dimensions. Each type has its advocates and followers. Theoretically those sizing by weight should be most accurate, but thus far their higher cost and relatively low daily capacity have been against them.

For smaller crops, an ordinary sloping table is all that is needed, altho the sizing will of course be much slower and probably less accurate. Such a table can be made in a half day with about four or five dollars worth of materials. A good size for this table is three by eight feet, with six-inch pieces for the sides. The table should have about six inches of slope, and should

e a number of long slots about half way down, in the floor, to permit the dirt and leaves to fall thru. The upper end and sides should be lined with burlap or its equivalent. And similar lining should be provided for the converging sides near the bottom. Such a table is sufficient for a crop of some five hundred barrels if satisfactory labor is available, and they will doubtless continue in use for many years.

KRAUT FROM SURPLUS CABBAGE

Sauerkraut, lately called liberty salad, may be made at home any time there is a small surplus of cabbage available. Very often some of the heads of the early cabbage crop burst open, so that they are not salable and soon spoil. These should always be turned into kraut. Small and unsalable heads should also be used. There is no winter vegetable more easily prepared, and if just a little care is given to the details of preparation, it will keep for months.

"Dose Watermillions"

It can also be canned and kept indefinitely. To make kraut, the cabbage heads are stripped of the outer green leaves, and sliced thinly into a stone crock or wooden keg. There are cheap hand slicers available for this or the cabbage may be shaved into thin slices with a meat knife. The finer the slices the better the quality. The container must be absolutely water tight, as much good kraut has been spoiled by the brine leaking away. It should also be clean, scalded out if possible. As the finely sliced cabbage is placed in the container, it is pounded down with a stick to secure a compact mass, and to force out the juice of the cabbage, which is to form the protecting covering against decay. Fine salt must be added at the rate of 1 pound to 40 or 50 pounds of sliced cabbage. This will also help to draw the water out of the cabbage. When the container is nearly full, the kraut should be covered with a clean piece of board, and weighed down so that the juice completely covers the cabbage. Kraut should be stored in a cool place and if made in summer, it is wise to cover the top of the container with hot paraffin.

The teachers of New York state believe in training children in agriculture and home work. Otherwise would 200 have volunteered this summer to supervise without pay the work where paid leaders were not available?

—

Some city folks are just foolish enough to think it looks funny for the wife of a farmer who drives a good automobile to have to carry water to her kitchen from a well in the yard.

Can an inexperienced man run a billion dollar meat business?

Under the proposed Kenyon bill the packing industry would be placed at the absolute command of a government official who would probably be without practicable experience.

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AGRICULTURE THE KEYSTONE OF NATIONAL PROSPERITY
ESTABLISHED 1880 PUBLISHED WEEKLY

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PHILADELPHIA, PA., SEPTEMBER 20, 1919.
VOLUME 46 NUMBER 12

Our job is to serve our readers. Whenever and wherever we can help you, write us.—The Editors.

Pershing Returns

ALL America rejoiced last week at the safe return to these shores of the modest hero, General Pershing. Never before was the welfare of so many of our sons in the personal keeping of one man, and never did a man discharge that duty with greater fidelity. He was given a great commission and he has discharged it with promptness and efficiency. He sorrows with the nation that all the boys cannot return with him. On his leaving France, General Foch said: "You leave your dead in our hands. On our soil we will care for them religiously and zealously."

Make Good Ensilage

AGAIN we caution readers to let the corn become sufficiently mature before cutting into the silo. Every season we have complaints from dairy feeders that their cows are off feed, have digestive troubles, and that the milk flow has fallen off. Very often these complaints wind up by saying that the silage is very sour. This is the result of cutting the corn before it is sufficiently ripe. Unless frost catches it too soon, corn should be well glazed and the dents forming. It contains the maximum amount of nutrition at that time and fermentation will produce the minimum of acid. Another mistake that is frequently made is to pull off ears. No crop of corn contains too much grain for making profitable feed, provided it is to be fed to first class milk cows.

Education in Thrift

FROM all indications it would seem that one branch which has been sadly neglected in the education of the average American is that of Thrift. We have evidently gone on the assumption that prosperity was synonymous with thrift; that because we were plentifully supplied with resources and opportunities all we had to do to supply ourselves was to reach out and grab. The proverbial "rainy day" is merely a figure of speech in America and the average individual regards it with contempt.

In New York state and city the educational authorities are inciting interest in the matter of saving among the children by enrolling the pupils in saving societies. While the immediate object is the sale of War Savings Stamps, the campaign offers an opportunity for education in the principles and practice of thrift that might well be adopted in every school in the land. The ability to save and conserve is the result of habit and education and these are best acquired in childhood. It is a difficult matter for the individual parent to develop this habit in the child when the common practice among the child's companions is to spend every cent they get as quickly as possible. Make saving as popular is spending is and thrift can be made a part of our national character. To do this the churches, Sunday schools and educational institutions must include it in their teachings.

One of the first things necessary to teach thrift to a child is that the money he spends should be his own, earned by performing some service, and that his spending money is limited by the service he renders. As long as a child has no appreciation of this law he will be a spendthrift.

A Church Survey

THE Inter-church World Movement of North America, a co-operative organization supported by a majority of the Protestant Churches, is conducting an investigation which should result in finding out many things which will give strength and efficiency to the rural churches. The organization represents 76 denominations, 200,000 churches and 50,000,000 people. The object is not to effect organic church union, but to afford a means of co-operation while each continues its particular line of wrok with its own funds. Special efforts with foreign language people will aid them to become intelligent citizens. The survey will also include information about all the neighborhood activities—the social life, granges, clubs, etc., and the roads, schools, occupations and industries. No such work has ever been done before and the results when tabulated should prove of real value to every locality.

The lack of intelligent co-operative, effort along neighborhood improvement lines has resulted in the neglect of much important work, and also the costly duplication of other work. It is to be hoped that this movement will result in the formation of a central committee composed of represenatives of all churches and other organizations in every neighborhood and apportion the work of the neighborhood to the body best qualified to perform it. Co-operating in this way would result in a better acquaintance with each other and consequently dissipate the narrow-minded jealousy existing in some neighborhoods.

The Cummins Bill Opposed

AS WAS to be expected the Association of Railway Executives, arguing before the Senate committee, opposes the plan for railway legislation contained in the Cummins bill. The chairman of the Association practically claims that in order to develop and maintain efficient transportation service railroad companies must have unconditional opportunity and unlimited profits; that since a commission would prevent the levying of unreasonable rates it would be impossible to make unreasonable profits. The force of the argument is based upon the age-old contention that the limitation of profits tends to discourage capital and prevents development. This is true if the limit is unreasonably low, but the Cummins bill, as we understand it, provides greater security for all stockholders than the old plan, while at the same time it would prevent injury to owners of the weaker companies and the public by unfair competition. The Cummins bill seems by all odds the best solution of this big and difficult problem and, while probably not perfect, is a basis from which legislation may be evolved that will recompense investors, deal fairly with labor and provide efficient service to the public at reasonable rates.

Lessening The Burden

PRESIDENT WILSON has declared that the primary step in relieving the nation of the cruel burden of high prices is to increase production, and that only by increasing production and the practice of rigid economy can we hope for a large decrease in the cost of living. Every one will undoubtedly agree with this, but how are we to induce those engaged in the different industries to increase production? It is an unquestionable fact that as long as money is plenty and necessities scarce prices will remain high in spite of all that investigators and officials can do. If people will not voluntarily act upon the principle voiced by the President, nothing but a general smash will let the air out of the bubble of inflated values now existing.

In general it may be said that owners and managers of business of all kinds would be perfectly willing to increase production if it were physically possible and economically safe to do so. The plants exist and the raw material is obtainable, but there is no use blinking the fact that the demands of organized labor stand in the way. Pennsylvania Farmer has always championed the just causes of labor, and demands for them as for the farmer the unrestricted right of collective bargaining. We condemn the present attitude of the steel trust officials in their stand against this right and their refusal to meet for arbitration, but we do not approve of the spirit which seems now to dominate the labor organizations, resulting in unreasonable demands and calamitous strikes. People to be trusted with the responsibility of a share in the management of business must show that they possess an appreciation of what is just and fair. Does the present cry for cheaper goods and, in the same breath, more pay and shorter hours indicate a sense of justice? The disposition to demand the most for the least while giving the least for the most is not an honest one.

Harmful Agitation

THE better understanding and greater harmony that seemed to exist between city people and farmers during the war, is fast disappearing—thanks to the influence of newspapers and politicians—and a spirit of hostility is appearing. This is a regretable situation and one that will react disastrously to both, but especially to city consumers. The adoption of short-sighted policies, such as those mentioned by a contributor on page 16, are not only unjust but are economically unsound. Farmers have always been admonished that the law of supply and demand is supreme in the market palce where his produce is sold, but the expounders of this law have considered it only in relation to the current prices of products, and have not applied the logic to the business of production as they have to the business of buying. Fair prices, reasonable profits and unrestricted markets will stimulate production in any line, while arbitrary interference in these things will just as surely curtail it. As a matter of self-preservation for consumers the moulders of public opinion in the city should stop their carping criticism and misrepresentation of farmers and their business.

Logical Results

THE Committee on Food Production and Conservation for Indiana, appointed in April, 1917, recently addressed a letter to the President, from which the following is quoted:

> "Up to the present time, the campaign on the High Cost of Living has been largely directed on food. It is appreciated by all that rents, clothing, recreation and many luxuries are taking the larger share of the income of the wage earner and the salaried worker. It would seem, therefore, that all the people should be encouraged and urged to reduce unnecessary expenditures along these many lines. The demand for luxuries, amusements and non-essentials is far beyond that of any previous time, and all of this causes the committee to feel that people are giving undue attention to expenditures for food and are failing to economize and conserve along other lines, which is taking the larger share of their income.
>
> "There is a general feeling among our farmers that the short hours of labor observed in industrial lines is militating against the efficiency on the farm and is reflected in the cost and volume of production. The same is true with all other activities in the preparation, handling and distribution of food consumption."

We believe all people who view the subject intelligently will agree with these statements. The consumption of soft drinks and other luxuries, and the attendance at movies and other places of amusement show no abatement altho the cost has doubled and trebled and a war tax added. Nor, is there any appreciable protest against the prices. What makes the big wages received today seem inadequate is the large share of them that goes for luxuries and non-essentials, and not the logical increase in the cost of the necessities of life. Much of the present agitation against the prices of food is rank nonsense and will result in further shortening the supply by beating down prices below the cost of production.

HARRISBURG LETTER

Asking the Housekeeper.—State Bureau of Markets officials will take a new and very practical method of finding out just what the housekeeper wants and why it is not being provided by the farmer and the first try out will be in Harrisburg which has been selected as a good field because of its proximity to farming districts, its railroad facilities, market houses and typical buying population. The bureau has had meetings here and had surveys made of the facilities, including the roads which are exceptionally good and much used by trucks. The plan is to send a questionaire to each housekeeper asking certain questions relative to the provisions supplied and whether there could be any improvement in quantity. The same inquiry will be made in other cities. In addition it is the plan to try out methods of buying direct from the farmer, for wholesale markets and for district markets which would add to the variety and quantity of produce for sale. The new bureau has not been making much noise, but appears to have been doing a great deal of studying.

The Welfare Commission.—It is probable that within the next few weeks that the greater part of the war time organization built up under the Committee of Public Safety, the Council of National Defense and the State Welfare Commission as the body directing civilian efforts in this State was variously named, will be demobilized. The Departments of Public Instruction, Labor and Industry and Agriculture will take over again the work which they used to handle and the new lines developed under stress of war and which have been found advantageous to continue. This means that the several lines which related to markets, farm advice and the like will once more be put into the hands of the Department of Agriculture whose new organization has been perfected to the point where it can take them on. The Department officials, moreover, have been at work for some weeks looking into the situation as it exists in the state and will be prepared to expand some of the lines when the time comes.

The School Situation.—Questions continue to arise regarding the school situation in rural districts and the pay of the teachers and while progress has been made toward getting understandings it looks as tho the next year or so would be spent in organizing public sentiment for the next legislature because the act as it stands now does not satisfy the teachers, is puzzling the directors and making the taxpayers apprehensive thru fear of more taxes and of teachers leaving schools. The truth of the matter is that an enormous sentiment for an increase was worked up without the manner and method being given much thought and it got complicated with rural problems which were a separate thing. The chances are that unless the teachers salary increase gets untangled that an effort will be made next session to get thru a law providing for a 20% increase of salary for teachers within certain limits, the State to pay ten percent and the district the rest. Incidentally, the problem of financing the schools is going to assume great proportions in the next few years. It will either be a case of reducing the grants made to hospitals and homes and demanding that there be greater support for them at home, or of new taxes. Unfortunately, the policy of building up and developing the forests so that they will be a larger factor in school income does not appear to be making the strides that it should and one of these days there will be a demand for either bigger appropriations for acquisition and management of public forests or a bond issue for that object. The coal, oil and gas situation in Pennsylvania point to a not far distant time when definite provision must be made for education.

Hope for More Schools.—It is possible that later in the year there may be more agricultural courses opened in the rural schools. There are now something like forty-five which are giving such specialized instruction and lack of teachers is holding back developments. There is any amount of inquiry about agricultural courses and some excellent schools have been established, but as yet the importance of the course has not been appreciated in many districts and in others where it is understood in its relation to the future of the food supply the resources and state aid are inadequate to work it out. The manual training idea seems to be more or less confined to the city where mechanics are being turned out for railroads and mills and not to have developed very far in the country districts where ability to repair a wagon or make a box stable counts for a lot when it is needed.

Telephone Decisions.—The Public Service Commission, which will this week hear the application of the Bell Telephone Company for permission to keep in effect the war time rates after November 30, is planning a sweeping inquiry into the general telephone situation again. One inquiry was made some years ago and as a result there were cuts in telephone rates. Then the war came along and changed conditions. The new inquiry is being made into operating and maintenance costs and will affect both the Bell and the independent lines. There have been numerous increases filed lately by telephone companies operating in the country and on the result of the inquiry may hinge some important action.

Cut It Short.—The decision of the Public Service Commission that there is no warrant or excuse for persons spending from fifteen to thirty minutes gossiping on a rural party line and disregarding persons who want service is being widely distributed and much commented upon. It is said that some companies have given orders that monopolizing of a line should be made a subject of inquiry by the exchange when complaint is made.

Agriculture Only.—Under a ruling by the attorney general's department there is no authority under the act of 1919 providing for incorporation of agricultural cooperative associations for such associations to do more than engage in farming, for preparation of products for market and marketing. The act does not contemplate such cooperative enterprises as community telephones, community ownership of electric lines for distribution of current bought from a company or running a store. It is for agriculture only and does not carry any provision for improvement of rural life conditions. There is abundant authority for such matters in other laws.—Hamilton, Harrisburg, Sept. 15, 1919.

NEW YORK LETTER

The State Fair.—A remarkable attendance was in evidence at our state fair. The first day had as big a crowd as there usually is on the biggest days, while Tuesday and Wednesday's record of tickets sold was 106,000 as compared to 69,000 the record for some years back. This was the 78th fair held in Syracuse, the state having financed it since 1900. Previous to that the State Agricultural Society was sponsor for the exposition. Not only was the number of all kinds of exhibits larger than ever this year, but the quality also was better. The women's domestic exhibits were far better than ever. The State Grange had a record attendance on Wednesday, reporting a gain in membership of 7,000 during the year. Seven booths of women's handicraft as shown in the women's building and the baby health contest exceeded by far any previous work of this sort. Besides examining over 300 babies, the physicians and nurses held a reception for the babies entered at the last four contests of this sort and the results of the work could be studied with much benefit. A nineteen-year-old Ohio boy, O. W. Beebe, of Columbus, the champion sheep shearer of his state, in front of the grand stand on Monday sheared sixteen sheep in record time. The sixty pounds of wool was at once sent to a woolen mill in Marcellus, where it was spun, woven and dyed. The following day it was cut by leading tailors of the city, and will be presented to the Governor during the two days he will spend at the fair. This with other leading events in the sheep exhibits was filmed and will be used in stimulating interest in the state's possibilities in sheep growing. Other agricultural events of note at the fair will also be filmed for use later. The county exhibits were bigger and better than ever, and exhibits by various farmers' co-operative organizations showed very convincing results in attractive exhibits.

Motor Truck Transport.—This method of transportation is growing fast in the state as the result of a demand by farmers, business men and consumers. The sale of fruit is one instance of extending the markets of the producers in this way. Many consumers who in this year of high priced fruits would never have been able to buy any have fared exceeding well as the growers have maintained salesmen who bring their goods by truck and sell on street corners at rates much lower than retail stores were asking. This work calls for better roads and many more of them, as truck lines have been established even over dirt roads to towns needing the service. With better roads this service, now carried on while the roads are dry, would then last nearly if not quite all the year round. Old communities are taking on new life, as the central bureau for motor transport searches out routes for needed motor express and motor freight.

Ithaca's New Curb Market.—The common council of Ithaca has authorized a new curb market, with a market master, tho there was already a public market. The fee to farmers using this privilege will be 15 cents daily, the market hours to be from 6 to 11 A. M.

Gruelling of Officials by Milk Committee.—The new "fair price" milk committee authorized by Governor Smith, composed of nine members, will start its investigation with the milk dealers, giving the farmer's side of the question attention later on. The first public hearing will be held on Monday. The committee's members are: Dr. Copeland and Dr. Day of New York City's health and market commissions; Francis Martin, District Attorney for he Bronx; Sophie Irene Loeb, a writer for the daily press; Lee Kohus, former distributor of milk to the poor; and Treston P. Lynn, Mrs. William Randolph Hearst, and State Senator Chas. E. Russell, appointed by Mayor Hylan. Special Commissioner, George Gordon Battle, who is to investigate the State Department of Farms and Markets is gruelling Dr. Eugene H. Porter, Commissioner of Foods and Markets, trying to fix the blame of high retail milk prices on him for helping the dairymen to get a fair price. Dr. Porter is also blamed for not having investigated the Department of Farms and Markets sooner in the pursuit of his duties, but protests that he was allowed no funds for such investigation. Dr. Porter and others interested in cheaper retail milk, favors government control of milk distribution. This was the recommendation of the milk committee appointed by the Governor, consisting of Dr. Finley and former Governor Glynn, and has caused a great disturbance in the ranks of the milk dealers, whose profiteering methods are thus greatly jeopardized.

NEW JERSEY NEWS

Acres of Jersey Crop Land Ruined by Flood.—Plans are being made for the drainage of the Upper Passaic Valley in North Jersey under the assumption that drainage of the land would aid in the elimination of mosquitoes. It has been emphasized that the redemption of swamp land in the state will have a tendency to lessen the cost of living for persons who must depend upon the markets for their food supply. It is estimated that a flood that occurred in the valley during the past summer covered an area of at least 20,000 acres and that the high water remained long enough to destroy crops on at least 13,000 acres.

Mount Holly Fair.—Thousands of farmers from all parts of the state, but particularly from the rich South Jersey agricultural districts, attended the Mount Holly Fair in Burlington County during last week and saw one of the best farm exhibits in the history of the exhibition. There was a fine display of agricultural machinery, including tractors which are more popular in this state than ever, splendid cattle and other things. Farmers' Day was a big event at the exposition. There will be a Farmers' Day at the Morris County Fair to be held in Morris County for three days beginning on September 25, while the agricultural exhibit which is now being planned for will be one of the most interesting ever seen in the county, from all accounts.

Get-Together Luncheon.—In order to further the interests of the organization, the Mercer County Poultry Association will hold a get-together luncheon in Trenton on September 30. At a meeting of the association here a report was read by Carroll H. Hoagland, of this city, on the proceeding of the National Convention held in Chicago.

DELAWARE NOTES

The great storm made it difficult to handle the corn crop as usual, and many are compelled to simply cut off the tops and save the fodder. This condition of the corn fodder crop will make a general shortage of rough feed for cattle during the winter, which will have to be replaced by clover and other hay crops, which fortunately have been very good this year.

In Milton, where there are three canning houses, only one of them, the Draper Packing Company, is running but their pack this year will be very short as the firm will not pay the price for the tomatoes that growers are asking. The large canning house of Birdsome Brothers, of New York and Milton, will not pack anything but lima and butter beans. As the crop of beans was damaged by the new insects that appeared early in the season this crop will be the smallest known for many years.

Usually the first of September finds matters around the Laurel freight station quiet, but it is different this year. On September 2, 26 cars were loaded with watermelons, six cars with cantaloupes, and four with tomatoes. This situation was the result of bad weather conditions in the spring, which made the farmers late in getting their crops started.

Tomatoes, which had been selling at $1 to $1.25 per ⅝ basket, have dropped in price to about 90 cents per basket. The local crop is very short and altho neither of the local canning factories is running there is a brisk demand for the fruit for shipment to various points on the Eastern Shore of Maryland by rail and boat.—Karl P. Thompson.

COUNTY NOTES

Brooks L. Ross, president of the Seaford Produce Association, and one of the State's most progressive farmers, has been appointed by J. H. Kimble, president and legislative agent of the Farmers' National Congress, to attend the annual National Congress of farmers to be held at Hagerstown, Md., October 28, 29, 30, and 31. Mr. Ross is the only farmer in the state to receive this appointment.

J. J. Ross & Son, Seaford farmers, report one of the best yields of wheat grown in Sussex County. They had planted 163 acres, which averaged twenty-nine bushels to the acre. This is considered an exceptionally fine yied, as from twelve to fifteen bushels is the average yield in this section. They planted the bearded purple seed and used 400 pounds of phosphate and nitrate of soda to the acre.

Must Show Lights.—The State Highway Department of Pennsylvania has given notice that there will be vigorous prosecution of persons who fail to display lights on wagons and other vehicles after dark. The new state law, it is stated, makes it the duty of local authorities to act and arrangements have been made to start arrests this month.

Dr. Munce Goes Up.—Dr. T. E. Munce, of Washington County, deputy state veterinarian for a number of years and one of the original meat inspectors named in the first meat inspection service of Pennsylvania a dozen years ago, has been appointed state veterinarian to succeed Dr. C. J. Marshall, who will devote his time to the veterinary department of the University of Pennsylvania. Dr. Marshall has been an active figure in state live stock work and there is much regret at his resignation. Dr. H. R. Church, of Wilkes-Barre, succeeds Dr. Munce. The bureau is now known as that of Animal Industry.

As far as personal gain is concerned, thriftiness is as important now as it was during the darkest days of the war.

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The Motor Truck bought to-day without Electric Starting and Lighting will be out-of-date to-morrow

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MOTOR ★ TRUCKS
—DEPENDABLE DELIVERY—
BETHLEHEM MOTORS CORPN. ALLENTOWN, PA.

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Defies the weather, "needs no paint," lasts a lifetime without repairs. When you build, or re-sheathe use
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A Sour Soil Won't Digest the Plant Food in the Fertilizer or Manure

to the best advantage for the growing crop if your soil contains so much Acid that the Bacteria in the soil is weakened. That is why you must Lime heavily to get a good catch of Alfalfa or Clover, as this gives the Bacteria a chance.

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POULTRY

VARYING HABITS OF THE LAYING HEN

Certain individual hens that regularly go to roost much earlier than the others and remain on the roost much longer in the morning, or go to the roost during the day, are very likely to be poor layers, or non-layers, at that time. The converse of this is by no means necessarily true.

I have known of hens that laid "a litter of eggs" and then went broody, or ceased for a time, repeating the operation several times during the year; and I have learned by the trap nest that some hens, regardless of breed, will lay right along, never skipping more than a few days at a time, for 10, 12 or more months "on a stretch."

Trapping has also disclosed the fact that some hens will produce nearly 100 percent of fertile eggs, while others in the same flock rarely or never lay a fertile egg.

It is a Pleasure to Own Fowls of This Kind

Regardless of a plentiful supply of oyster shell, grit and bone on hand, some hens will persist in laying thin-shelled and non-shelled eggs, while others that are deprived of these requisites for a long time will lay perfectly-shelled eggs.

Some hens in cold houses, and in the coldest winter weather, and without any special feed or care will continue to lay right along, while other hens with the best of attention and given the best egg-producing material, never lay in cold, severe weather.

With the majority of hens the size of the egg is reduced as they approach the end of a "laying period," but there are exceptions where full-sized eggs are laid to the last.

The dark, or medium-brown egg layers gradually exhaust their supply of coloring material, and their eggs grow lighter and lighter as laying continues. But I have some brown-egg hens that kept up the standard color to the end.

Some hens after laying an egg will send forth a vigorous cackle—but some will not make the least bit of noise.

A great thirst overtakes some hens immediately after they quit the nest, but there are others that seldom drink at that time.

As a rule active hens lay regularly and abundantly, but there are some very active ones that are very irregular.

Immediately after being broken up from broodiness, the majority of hens resume laying, but I have known some to hold off for a month or so.

Some hens lay every day for three or four days, or more, and then skip a day; others lay one day and then skip three or four. Occasionally we have hens that lay every day for 60 or more days in succession, with no skips.

It seems to be possible for some hens to produce 200 or more eggs in one year on more unfavorable conditions of housing, feeding and care than are given other hens that produce half as many, or less.

Quite frequently we have hens that lay uniform eggs, so much so that one may readily learn to identify the layer by the individuality of her egg. Then we have hens that produce eggs which vary more or less in size, shape and general appearance. It is a scientific fact that no two eggs are exactly alike, whether laid by the same hen or not.—Michael K. Boyer, New Jersey.

THE FARM FLOCK IN SEPTEMBER

In September it pays to give the farm flock an autumn culling and only keep the birds that are suitable for breeding stock. At the present price of feed the farmer cannot afford to keep many late hatched birds if there is a good flock of early pullets. They are the birds that will lay before Christmas and beginning paying their board. The late hatched birds cost money to finish and often their board bill is so large by spring that it takes a long period of laying to balance the books.

Plan on buying one or two good poultry books for winter reading and keep informed concerning the latest methods of poultry production. Then read those books in connection with the poultry departments of the farm journals and many points will be picked up that will help to increase the profits from the farm flock. When possible, it pays to visit poultry farms and study their methods. In our experience we have never found a poultryman who did not give visitors a few good points that made the visit profitable.

All of the construction work that is necessary should be done in the fall, if possible. On the poultry farm there is no spare time in the spring as the work of brooding and hatching keeps all of the available labor very busy. When colony houses, laying houses and fences can be finished in the fall it gives the poultryman more time to devote to the exclusive spring work of producing a good crop of young chicks.

One of the best lessons about late hatched chicks can be learned by comparing the late and early hatched birds during September. The late hatched chicks seem to suffer from the cold nights of fall more than the early birds suffer during the cold wet weather of early spring. Of course, the early birds have the protection of the hens and also they seem to have more vigor than the late hatched birds which obtain their start during the hot weather.

Do not neglect some meat food for the pullets if they are expected to lay fall eggs. Beef scrap stores very well in a dry place and is fine to incorporate in the mash. Test it with boiling water and if it has the odor of spoiled meat, do not use it. Fish scrap is sometimes used to good advantage in increasing egg production. If the farmer has plenty of sour milk available it can be sold to the hens at a good price and they can pay for it in eggs.

The trading of cockerels to obtain new blood for the flock is an inexpensive method but it is not always satisfactory as the best quality birds can seldom be obtained in that way. When good cockerels can be purchased at moderate prices it does not pay to winter over inferior birds and use them as breeders just because they can be secured thru a trade. It is better to market the birds that would be in the trade and use the money toward one or two cockerels of the finest breeding. The cockerels and pullets raised during the next year will be all the evidence needed to prove that good breeding stock pays.—Kirby.

A FEEDING QUERY

"I have a chance to buy some very lean chickens every week and would like to know what kind of feed I should give them. I also have the chance to buy the offall from ten beeves every week which could be ground up. Should this be cooked and mixed with the grain, or fed in a raw state? Could it be fed separately?"—W. B. Brenhardt, Montgomery Co., Pa.

If you wish to fatten the chickens as quickly as possible without keeping them growing for a time, it will be best to have the grain ground and made into a mash by mixing with milk. Mix together two parts corn meal, 1 part middlings, and one part wheat bran. Keep the meat meal in a hopper where they can help themselves, first feeding small quantities until they become accustomed to it. If it is fed raw, it should be fed daily in small quantities and must be fresh. At the maximum, not more than 10 percent of the ration should be meat and this not for too long at a time. Do not neglect to furnish plenty of grit and pure water.

Another plan, one that will cause growth as well as fatten, is to give one feed a day of the above ration, and for the other feed or feeds give whole or cracked corn, and keep a mash of middlings and bran before them all the time. They will be able to eat more in a day this way than where a mash is fed all the time. See that they are supplied with some green feed every day, and above all keep the quarters and feeding hoppers clean.

Make your hens moult quickly
Dr. LeGear's Poultry Prescription
Dr. L. D. LeGear's

Get more winter eggs

The moult is a severe test of a hens strength. It calls on her to supply all her surplus energy and flesh to make feathers. Hens must have a tonic during this critical period, to supply them with more energy, and help them to digest and *use* every ounce of the feed. Make your hens moult properly this year, by giving them

Dr. LeGear's Poultry Prescription
(Powder)

in their feed. This prescription, compounded from my 27 years' veterinary and poultry raising practice, absolutely cuts down the time and strain required for moulting, keeps hens in strong, vigorous condition and insures your getting more winter eggs from your hens. Don't lose profits from high winter egg prices by neglecting your hens during the moult. Try this famous remedy, recommended by thousands. I guarantee that it will help make your hens lay more eggs.

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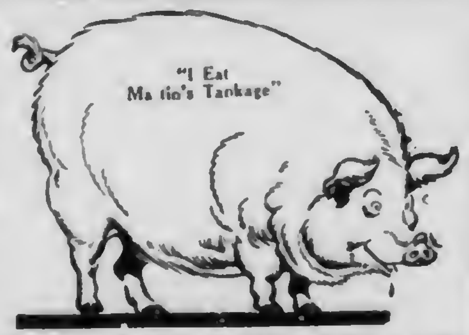

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CANNING PEACHES, PEARS AND PLUMS

To Make Winter Meals Taste Good

> "The north wind will blow
> And we shall have snow,
> And what of the ones who canned not!
> Poor things!"
>
> "They'll run to the store,
> Pay money galore,
> And growl at the high cost of food,
> Poor things!"

Peeling Peaches

But Pennsylvania Farmer housekeeper readers are more thrifty. In a section so full of preserving lore it is not likely that much will go to waste provided there is time and strength to "do it up." In regard to conservation of time and strength in the fall preserving, let's not take the time to peel the peaches by hand. Let's instead submerge them by the wire basket method into boiling water, then at once into cold water to firm up the pulp, then we can slip off the skins wholesale, halve the fruit and take out the pits very rapidly, and get it into the cans in excellent shape.

Processing

Have the cans already sterilized by boiling 15 minutes in a panful of water. And have your syrup ready to fill up the canfuls of peaches. Make the syrup by using 7 cups sugar per 4 quarts water, and boiling it 5 minutes. if you wish a thicker syrup, use 11 cups sugar per the 4 quarts of water. Fill the cans with the syrup, after you have packed the peach halves in neatly with the pit sides hugging the rounded sides of the halves below them. Put on the rubber rings (which would better have been standing in a hot soda bath made in proportion of 1 teaspoon soda per 1 quart of water), adjust the covers loosely (previously boil them 15 minutes to make sure that there is no trouble alive between the porcelain tops and the metal; then set on a rack in your boiler, having the water bath come up over the tops of the cans, so that there will be a uniform cook all thru the can—it has been demonstrated that one does not get this where the water comes only part way up the cans. Better have your water bath hot so that cooking will begin right away, because this makes a better color in the product.

You can lower cans into hot water without breakage if you take them out of hot water, just you start packing each one, pack it quickly, fill up with hot syrup, and lower slowly by means of can fork into the hot water bath. Boil the quart canfuls 20 minutes; the 2-quart sizes 35 minutes. At once tighten the covers when the cans are taken from the boiler, and stand on their heads to make sure that there is no leaking. Let stand thus until they are cool. Avoid letting a draft blow on them while they are hot; that will be likely to break them.

Canning Plums

Wash the plums, prick with a needle to prevent the pulp from bursting the skins and making a mushy mess of the fruit while it is cooking. Pack firmly into jars taken from a hot bath, fill with syrup made by boiling 11 cups sugar per four quarts water for 5 minutes, adjust the rubber rings and the covers loosely, set on the rack in the water bath as directed for the peaches, and process for 15 minutes after the water about the cans starts to boil, having the water bath come well, over the can tops. Lift out at end of cooking period and at once tighten tho covers.

Getting Pears Ready to Can

Peel and use a pear scoop for taking out the cores if possible to get one in your town, because this makes such a neat cavity. Drop the peeled fruit into cold water with a little leman juice or vinegar in it to prevent discoloration. Or one can blanch by lowering the pears into boiling water by means of a wire basket, for 15 seconds, then plunging for as many seconds into cold water. Pack in the cans by putting the first ones in with the stem ends up, then the next layer with the stem ends down; thus one can get more into the can, and the pack looks nicer. Fill up the cans with a hot thin syrup made of 7 cups sugar per 4 quarts water, boiled 5 minutes, then process 25 minutes in the water bath after the water gets to boiling violently. Then lift out and tighten covers.—H. M.

FRUIT SWEET PICKLES

Euchered Pears and Plums

Per 9 pounds plums and pears, allow 2 quarts vinegar, 6 pounds sugar and 1 ounce cinnamon. Boil the vinegar and cinnamon together, pour over the uncooked fruit in a crock, and let stand 24 hours. Next day heat up the vinegar, and pour it again on the fruit. Repeat this for five days, the last time cooking the fruit 15 minutes in the vinegar, then sealing in cans while boiling hot.

This recipe is also good for peaches and prunes.

Spiced Peaches

Per 6 pounds fruit allow 3 pounds sugar, 1 pint vinegar, 1 ounce stick cinnamon, and 2 cloves stuck in each peach. Put the stick cinnamon in a cloth bag and boil in the vinegar 15 minutes, then put in the peaches, and boil until they are tender, and seal at once while boiling hot.

Ginger Pears

Peel and core some rather under-ripe pears, and cut in thin slices. Per 8 pounds pears allow 8 pounds sugar, 1 cup water and the juice of 4 lemons, the lemon rinds cut into thin strips, and ⅛ pound ginger root cut into small pieces. Simmer all together until thick as marmalade, then pack in cans. adjust rubbers and the can covers loosely, and cook in water bath for 10 minutes after the water about the cans gets to boiling. Lift out cans and tighten covers at once.

Cockroaches will succumb to sodium fluorid or to pyrethrum powder placed about their hiding places and runways. The pyrethrum powder must be fresh and pure.

—

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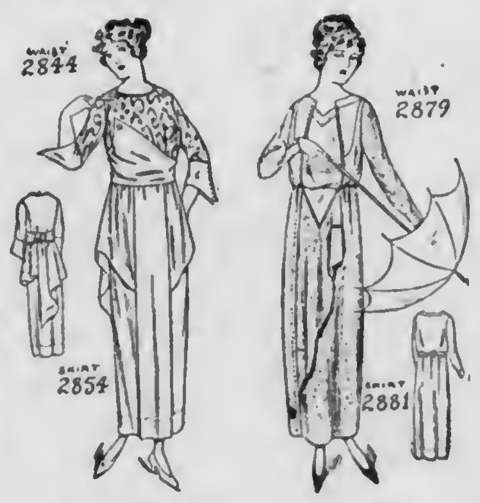
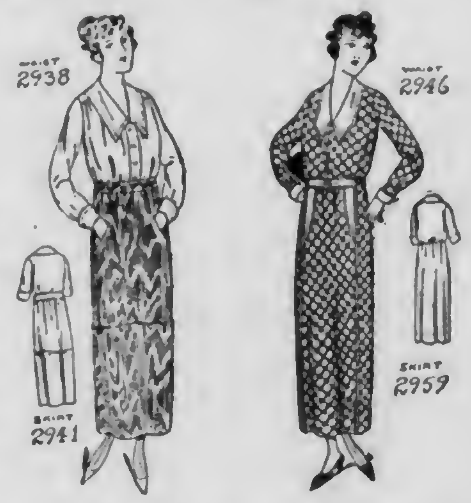
Waist, 2844; Skirt, 2854.—The waist is cut in 7 sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. The skirt is cut in 7 sizes: 22, 24, 26, 28, 30, 32 and 34 inches waist measure. A medium size will require 6½ yards of 44-inch material for the entire dress. The skirt meassures about 1⅞ yards at the foot with plaits extended. This illustration calls for two separate patterns at 10 cents each.

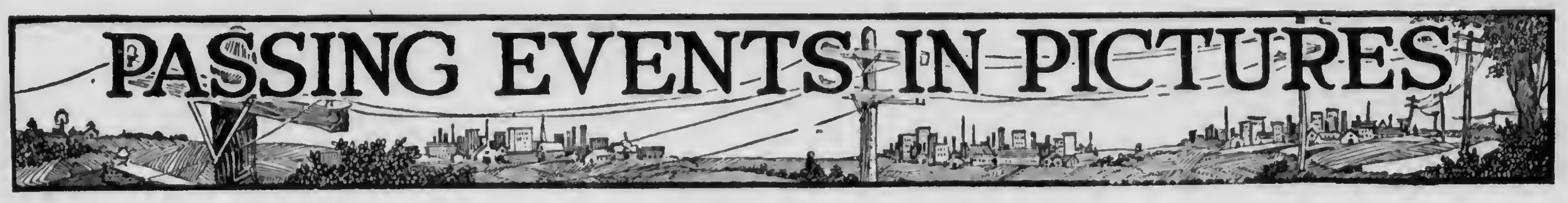


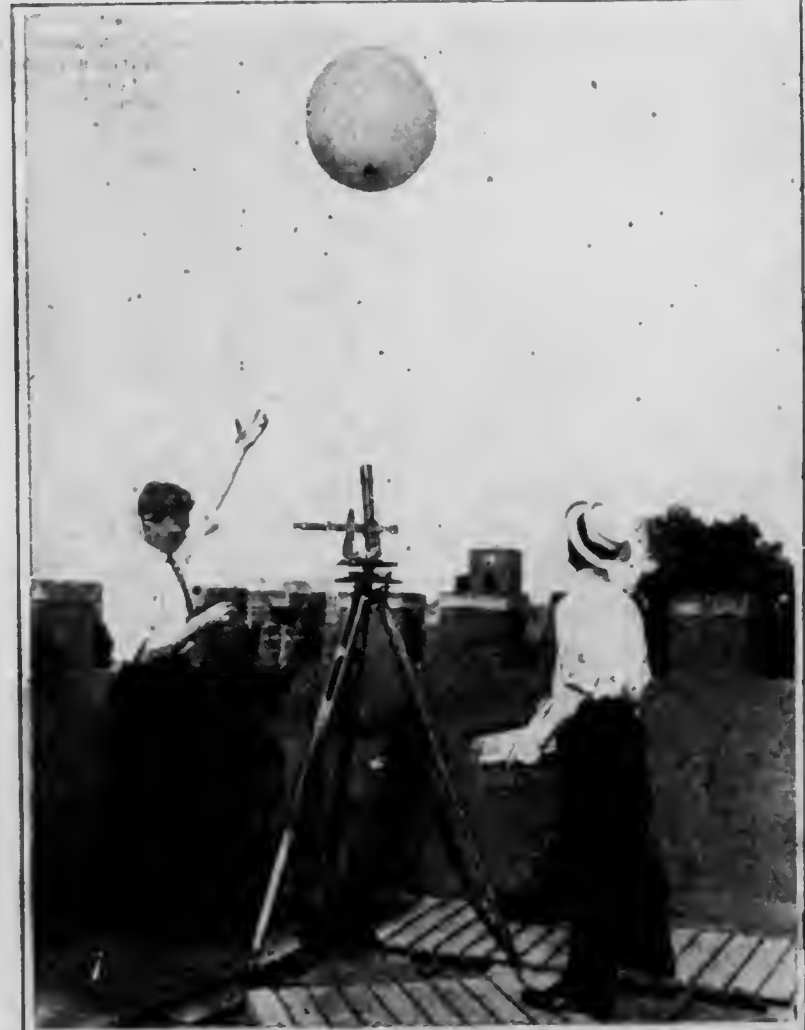
Waist, 2879; Skirt, 2881. Blue tricotine combined with white linen would be very effective for this model. The waist pattern is cut in 7 sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. The skirt in 7 sizes: 22, 24, 26, 28, 30, 32 and 34 inches waist measure. A medium size will require 5 yards of 44-inch material. Width of skirt at lower edge is about 1½ yard. This illustration calls for two separate patterns at 10 cents each.

Waist, 2938; skirt, 2941.—This costume comprises a smart shirt waist, and a stylish comfortable skirt. The waist pattern is cut in 7 sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. Size 38 will require 3 yards of 36-inch material. The skirt pattern is cut in 7 sizes: 22, 24, 26, 28, 30, 32 and 34 inches waist measure. Size 24 will require 3½ yards of 32-inch material. The width at lower edge of the skirt, is about 1½ yard. This illustration calls for two separate patterns at 10 cents each.



Waist, 2946; Skirt, 2959.—Checked suiting in brown was employed, with sand colored silk jersey for decoration. Serge and satin will also combine well for this model. The waist pattern comes cut in 7 sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure; the skirt pattern in 7 sizes: 22, 24, 26, 28, 30, 32 and 34 inches waist measure. To make the dress for a medium size will require 5½ yards of 36-inch material. Width of skirt at lower edge is about 1½ yard. This illustration calls for two separate patterns at 10 cents each.





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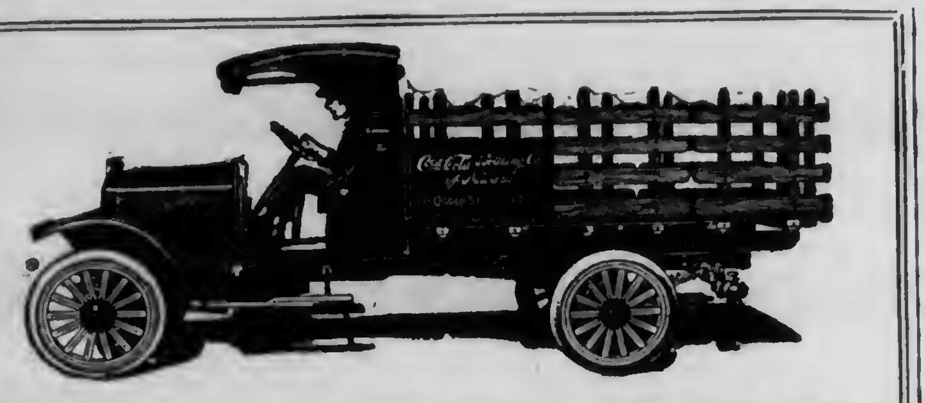

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"PASSING THE BUCK" TO THE FARMERS

Probably no city of its size in Pennsylvania—and possibly in the country—has better markets than Reading. They are not of the curbstone kind, but are housed in large, well-ventilated and lighted buildings, where one may do marketing in comfort. These buildings are owned for the most part by corporations, which charge a reasonable rental to the tenants and give excellent service in return. None of the markets are owned by the city.

Politics and the high cost of living have combined to throw suspicion upon the farmers who have made these markets possible, and as a result the people of Reading may realize that the game of politics is an expensive one when it seeks to arouse the antagonism of the purveyors of the food of a city of more than 100,000 inhabitants. In order to make themselves solid with the city voters, the members of council recently passed an ordinance aimed at "forestalling" the markets, a practice which exists in the imagination of people who object to paying reasonable prices for fresh country produce. The councilmen led the city buyers to believe that they could swat the high cost of living by preventing the wily farmers from selling their produce to the corner grocerymen, who, in turn, according to the city heads, would "gouge" their customers.

In the language of the streets, "they passed the buck" to the farmers and truckers who attend the Reading markets. It was an easy game to pull off. The farmers had no votes in electing city councilmen, and the grocers—unlike the saloonkeepers—could not influence a lot of ward heelers. Under the provisions of this ordinance a farmer or trucker who is a stall holder is forbidden to sell any of his produce to a grocer or dealer for sale to others.

There are also provisions against stall owners getting together and fixing prices on any market day and forbidding them to throw away the surplus stock of produce. According to the Reading police—who are the henchmen of the city council—farmers and truckers are in the habit of strewing the roads about Reading, on their way home, with the truck they failed to sell to the citizens at high prices.

The grocers, who are a hard working set of business men, were represented by an attorney, while the farmers, as usual, had to put up a fight unaided by legal advice. The age-old enmity between city and country was shown at the hearing. A number of city men, who apparently were of the kind found warming chairs in cigar stores, were present and insisted upon being heard. One of them said "he was sure it cost no more to conduct a farm now than it did 15 years ago."

Another said "the farmers only work a few months in the year and make enough to ride about in autos the balance of the year and have a good time."

Neither of these men were among the Berks land army that went out from Reading last year and did good service helping the farmers.

The bill as passed tends to throw suspicion upon the farmers who attend the markets of Reading. If a group of them stand about in conversation and then go to their respective stalls, and if a patron who saw them made the rounds and found that each man asked the same price for peaches or tomatoes or lettuce it would form the basis of a charge of price-fixing. According to the city councilmen, the farmers are not allowed to fix the prices for their produce. Every other man in business in Reading is allowed that privilege. Just now the cigar makers of Reading are on a strike for a 50 percent advance in the price for making cigars, and yet no one seems to regard their action as "price fixing." The Merchants' Bureau of the Reading Chamber of Commerce and the Rotary and Kiwanis clubs, organizations of retailers and middlemen, meet weekly and discuss business matters, and no one hinks they would be guilty of "price fixing" at these meetings.

The grocers who have been getting their supplies from farmers having stalls in the markets will not have that accommodation under this ordinance. Frequently these grocers have placed their order with the farmers in the early part of the week for the Saturday produce. The farmers have been in the habit of taking the truck to the market with them and the grocers have called there for it. Under the new law the farmer will be subject to a fine for selling to the grocer at the market any truck, even tho it had been ordered a week ahead.

To anyone familiar with Reading markets and the advancing cost of living in that city, the solution of high prices does not lie with the passing of ordinances by city council. Many of the customers expressed surprise the next market day following the passage of the bill that prices at the market stalls had not taken a drop, as the councilmen had predicted. They overlooked the law of supply and demand.

For years Reading had the advantage of being the only outlet for the produce raised in a large part of Berks and adjoining counties, and low prices have prevailed simply because the farmer had no other place in which to sell. With the advent of the motor truck, however, Philadelphia has been brought nearer to the Berks County farmers, and much of the truck and eggs and poultry that found its way to Reading now goes to Philadelphia and even New York City. This increased demand has had its effect on the prices which Reading people have had to pay. A Douglessville farmer has a stall in the Terminal Market, Philadelphia, and makes semi-weekly trips in his motor truck. A poultryman at Yellow House finds a ready market for his eggs and dressed poultry in New York City, shipping by express nearly every day.

In the lower section of Berks Co., there are dealers who go about with large auto trucks buying up the produce and eggs for the Philadelphia markets at prices almost as good as could be secured at retail in Reading. Often I have been offered within two cents a dozen, spot cash, of the price I knew I would receive at my stall in the market for eggs by these Philadelphia dealers. It would have paid me to have accepted the offer, but I knew I would disappoint good customers who have been looking to me for their supply of fresh eggs and poultry each Saturday.—A. J. Bradley.

The meal which is planned is more interesting, has better food value and more variety, and costs less. It may not always be possible to carry out all details, because of unexpected guests or need to use left-overs, but it is less trouble to readjust a good menu than to make a new one.

THE TRUTH DOES NOT MATTER

For weeks almost every issue of a New York newspaper has carried sensational headlines over columns of misleading matter to the effect that the dairy farmers are working with the milk dealers to starve the babies of New York City by boosting the price of milk. People of the city who have no other way of knowing the facts are told how farmers are profiteering and how they could, if they would, produce milk for half or two-thirds of the price they receive for it. After the investigators appointed by the Governor reported that farmers were not receiving too much for their milk, the newspaper in question cleverly shifted its attack from the farmer to the farmers' organization and its leaders. This is the old game of trying to weaken and destroy an organization by creating lack of confidence among its members.

When politicians, demagogues and yellow journals want to stir up the people for ulterior purposes, milk makes a handy weapon to do it with, because everyone in the city must use milk and very few know any of the real problems of milk production. It is therefore easy to lead people to believe almost anything that is told them. Of course, it makes no difference to the demagogues that they are in danger of destroying, or greatly injuring a necessary industry—an industry that is far more necessary to the consumer than it is to the farmer, and an industry that it takes years to build up. It matters not that every fair investigation has shown that farmers were not receiving too much for their milk and for long periods have sold it for less than their costs of production. It makes no difference to the yellow journal that its misleading and lying statements are poisoning the minds of city people and creating a class feeling for which there is no reason, and which is contrary to the first principles of Americanism.

Nor is the situation peculiar to New York. There seems to be a nation-wide attempt on the part of city politicians to make a grandstand play before the people by prosecuting farmers and their organizations. The principle of collective bargaining is granted by everyone without question to labor unions, but it is denied to the farmer. He is prosecuted for co-operating, while had the farmers, especially the dairymen, not organized to protect themselves against the dealers thousands of them would have been driven out of business and there would be a worse food shortage than there is at the present time. In fact the tremendous flow of population from country to city in the last quarter of a century shows that the city had the greater advantages and that making a living in the country was no sinecure.

If the farmer is a profiteer, or if he is guilty of wrong doing, he should be punished. But it seems hard to believe that the millions of farmers of America who are trying to co-operate to put agriculture on a lasting basis are all criminals. The history of the country shows that the American farmer has not been, found wanting in times of national stress. He is needed now to produce food, but he cannot do it and will not much longer continue to do it if he is constantly investigated and prosecuted in his efforts to make an honest living.—E. R. Eastman, Editor, Dairymen's League News.

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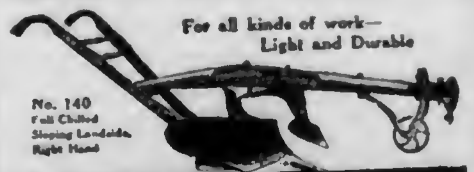

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KEZIAH COFFIN

By JOSEPH C. LINCOLN

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SYNOPSIS

Keziah Coffin is packing up to move from the house which she and her brother had occupied until his death. Grace Van Horne, Eben Hammond's ward, was assisting Keziah to gather and pack the household goods, and in the meantime discussing the prospective new minister who was due to arrive to take up his duties as pastor of the "Regular" Church, of which Keziah was a member. Eben Hammond was a "Come-Outer" and of course his ward was required to attend the same church. While they were discussing the merits and demerits of the two sects, Abishia Pepper, commonly called "Kyan" Pepper, arrived. Grace hid herself and Keziah sensing his errand at once asked him to take down the stovepipe.

During this operation he haltingly proposes to Keziah. At the critical moment the chair gives way and stovepipe, soot, man and all come tumbling to the floor. He is rejected with scorn. Elkanah Daniels, a "Come-Outer" and owner of the house Keziah is vacating, also calls and condescendingly proposes. He is likewise turned down flat.

◆

"Yes," she cried eagerly. "Then Cap'n Elkanah came and the very first thing he said was—I almost laughed in his face."

"Almost! Humph! that's no exaggeration. The way you put out of that door was a caution."

"Yes, but what did the cap'n mean? Is it a secret? Ahem! shall I congratulate you, auntie?"

"Grace Van Horne! there's born fools enough in this town without your tryin' to be one. You know 'twa'n't that. Tho what 'twas was surprise enough, I will say," she added. "Grace, I ain't goin' away tomorrow."

"You're not? Oh, splendid! Has the cap'n decided to let you stay here?"

"I guess his decidin' wouldn't influence me, if 'twas stayin' in his house he meant. The only way I could live here would be on his charity, and that would be as poor fodder as sawdust hasty puddin', even if I was fond of charity, which I ain't. He said to me—Well, you take your things off and I'll tell you about it. You can stay a little while, can't you?"

"Yes, I was going to stay all the afternoon and for supper, if you'd let me. I knew you had so much to do and I wanted to help. I told uncle and he said certainly I ought to come. He said he should try to see you and say good-bye before you left tomorrow."

"You don't say! And me a Regular! Well, I'm much obliged, tho I guess your Uncle Eben won't see me tomorrow—nor speak to me again, when he knows what I am going to do. Grace, I ain't goin' to leave Trumet, not for the present, anyhow. I've got a way of earnin' my livin' right here. I'm goin' to keep house for the new minister."

The girl turned, her hat in her hand.

"Oh!" she cried in utter astonishment.

Keziah nodded. "Yes," she affirmed. "That was what Elkanah's proposal amounted to. Ha! ha! Deary me! When he said 'proposal,' I own up for a minute I didn't know what was comin'. After Kyan I was prepared for 'most anything. But he told me that Lurany Phelps, who the parish committee had counted on to keep house for Mr. Ellery, had sent word her sister was sick and couldn't be left, and that somebody must be hired right off 'cause the minister's expected by day after tomorrow's coach. And they'd gone over every likely candidate in town till it simmered down to Mehitable Burgess. And Cap'n Zeb Mayo spoke right up in the committee meetin' and gave out that if Mehitable kept house for Mr. Ellery he, for one, wouldn't come to church. Said he didn't want to hear sermons that was inspired by her cookin'. Seems she cooked for the Mayos one week when Mrs. Mayo had gone to Boston, and Cap'n Zeb declares his dreams that week was somethin' awful. 'And I'm a man with no nerves and mighty little imagination,' he says. 'Land knows what effect a dose of Mehitable's biscuits might have on a minister.'

"And so," continued Keziah, "they decided Mehitable wouldn't do, and finally somebody thought of me. I have a notion 'twas Zeb, altho Cap'n Elkanah did his best to make me think 'twas himself. And the cap'n was made a delegate to come and see me about it. Come he did, and we settled it. I went down to the parsonage with him before dinner and looked the place over. There's an awful lot of sweepin' and dustin' to be done afore it's fit for a body to live in. I did think that when I'd finished with this house I could swear off on that kind of dissipation for a while, but I guess, judgin' by the looks of that parsonage, what I've done so far is only practice." She paused, glanced keenly at her friend and asked: "Why! what's the matter? You don't act nigh so glad as I thought you'd be."

Grace said of course she was glad; but she looked troubled, nevertheless.

"I can hardy make it seem possible," she said. "Is it really settled—your salary and everything? And what will you do about your position in Boston?"

"Oh, I'll write Cousin Abner and tell him. Lord love you, he won't care. He'll feel that he did his duty in gettin' me the Boston chance and if I don't take it 'tain't his fault. His conscience'll be clear. Land sakes! if I could clean house as easy as some folks clear their consciences I wouldn't have a backache this minute. Yes, the wages are agreed on, too. And totin' them around won't make my back ache any worse, either," she added dryly.

Grace extended her hand.

"Well, Aunt Keziah," she said, "I'm ever and ever so glad for you. I know you didn't want to leave Trumet and I'm sure everyone will be delighted when they learn that you're going to stay."

"Humph! that includes Laviny Pepper, of course. I cal'late Laviny's delight won't keep her up nights. But I guess I can stand it if she can. Now, Grace, what is it? You ain't real pleased? Why not?"

The girl hesitated.

"Auntie," she said, "I'm selfish, I guess. I'm glad for your sake; you mustn't think I'm not. But I almost wish you were going to do something else. You are going to live in the Regular parsonage and keep house for, of all persons, a Regular minister. Why, so far as my seeing you is concerned you might as well be in China. You know Uncle Eben."

Keziah nodded understandingly.

"Yes," she said, "I know him. Eben Hammond thinks that parsonage is the presence chamber of the Evil One, I presume likely. But, Grace, you mustn't blame me, nd if you don't call I'll know why and I shan't blame you. We'll see each other once in a while; I'll take care of that. And, deary, I had to do it—I just had to. If you knew what a load had been took off my mind by this, you'd sympathize with me and understand. I've been happier in Trumet than I ever was anywhere else, tho I've seen some dark times here, too. I was born here; my folks used to live here. My brother Sol lived and died here. His death was a heavy trouble to me, but the heaviest came to me when I was somewheres else and—well, somehow I've had a feelin' that, if there was any real joys ever planned out for me while I'm on this earth, they'd come to me here. I don't know when they'll come. There's times when I can't believe they ever will come, but— There! there! everybody has to bear burdens in this life, I cal'late. It's a vale of tears, 'cordin' to you Come-Outer folks, tho I've never seen much good in wearin' a long face and a crape bathin' suit on that account. Hey? What are you listenin' to?"

"I thought I heard a carriage stop, that was all."

Mrs. Coffin went to the window and peered into the fog.

"Can't see anything," she said. "'Tain't anybody for here, that's sure. I guess likely 'twas Cap'n Elkanah. He and Annabel were goin' to drive over to Denboro this afternoon. She had some trimmin' to buy. Takes more than fog to separate Annabel Daniels from dressmakin'. Well, there's a little more packin' to do; then I thought I'd go down to that parsonage and take a whack at the cobwebs. I never saw so many in my born days. You'd think all the spiders from here to Ostable had been holdin' camp meetin' in that shut-up house."

The packing took about an hour. When it was finished, the carpet rolled up, and the last piece of linen placed in the old trunk, Keziah turned to her guest.

"Now, Gracie," she said, "I feel as tho I ought to go to the parsonage. I can't do much more'n look at the cobwebs tonight, but tomorrow those spiders had better put on their ascension robes. The end of the world's comin' for them, even tho it missed fire for the Millerites when they had their doin's a few years ago. You can stay here and wait, if 'twon't be too lonesome. We'll have supper when I get back."

Grace looked tempted.

"I've a good mind to go with you," she said. "I want to be with you as much as I can, and he isn't there yet. I'm afraid uncle might not like it, but——"

"Sho! Come along. Eben Hammond may be a chronic sufferer from acute Come-Outiveness, but he ain't a ninny. Nobody'll see you, anyway. This fog's like charity. It'll cover a heap of sins. Do come right along. Wait till I get on my things."

She threw a shawl over her shoulders, draped a white knitted "cloud" over her head, and took from a nail a key, attached by a strong cord to a block of wood eight inches long.

"Elkanah left the key with me," she observed. "No danger of losin' it, is there. Might as well lose a lumber yard. Old Parson Langley tied it up this way, so he wouldn't miss his moorin's, I presume likely. The poor old thing was so nearsighted and absent-minded along toward the last that they say he used to hire Noah Myrick's boy to come in and look him over every Sunday mornin' before church, so's to be sure he hadn't got his wig on stern foremost. That's the way Zeb Mayo tells the yarn, anyhow."

They left the house and came out into the wet mist. Then, turning to the right, in the direction which Trumet, with unconscious irony, calls "downtown," they climbed the long slope where the main road mounts the outlying ridge of Cannon Hill, passed Captain Mayo's big house—the finest in Trumet, with the exception of the Daniels mansion—and descended into the hollow beyond. Here, at the corner where the "Lighthouse Lane" begins its winding way over the rolling knolls and dunes to the light and the fish shanties on the "ocean side," stood the plain, straight-up-and-down meeting house of the Regular society. Directly opposite was the little parsonage, also very straight up and down. Both were painted white with green blinds. This statement is superfluous to those who remember Cape architecture at this period; practically every building from Sandwich to Provincetown was white and green.

They entered the yard, thru the gap in the white fence, and went around the house, past the dripping evergreens and the bare, wet lilac bushes, to the side door, the lock of which Keziah's key fitted. There was a lock on the front door, of course, but no one thought of meddling with that. That door had been opened but once during the late pastor's thirty-year tenantry. On the occasion of his funeral the mourners came and went, as was proper, by that solemn portal.

Mrs. Coffin thrust the key into the keyhole of the side door and essayed to turn it.

"Humph!" she muttered, twisting to no purpose; "I don't see why—This must be the right key, because—Well, I declare, if it ain't unlocked already? That's some of Cap'n Elkanah's doin's. For a critter as fussy and particular about some things, he's careless enough about others. Mercy we ain't had any tramps around here lately. Come in."

She led the way into the dining room of the parsonage. Two of the blinds shading the windows of that apartment had been opened when she and Captain Daniels made their visit, and the dim gray light made the room more lonesome and forsaken in appearance than a deeper gloom could possibly have done. The black walnut extension table in the center, closed to its smallest dimensions because Parson Langley had eaten alone for so many years; the black walnut chairs set back against the wall at regular intervals; the rag carpet and braided mats—homemade donations from the ladies of the parish—on the green painted floor; the dolorous pictures on the walls; "Death of Washington," "Stoning of Stephen," and a still more deadly "fruit piece" committed in oils years ago by a now deceased boat painter; a black walnut sideboard with some blue-and-white crockery upon it; a gilt-framed mirror with another outrage in oils emphasizing its upper half; dust over everything and the cobwebs mentioned by Keziah draping the corners

(Continued on Page 21.)

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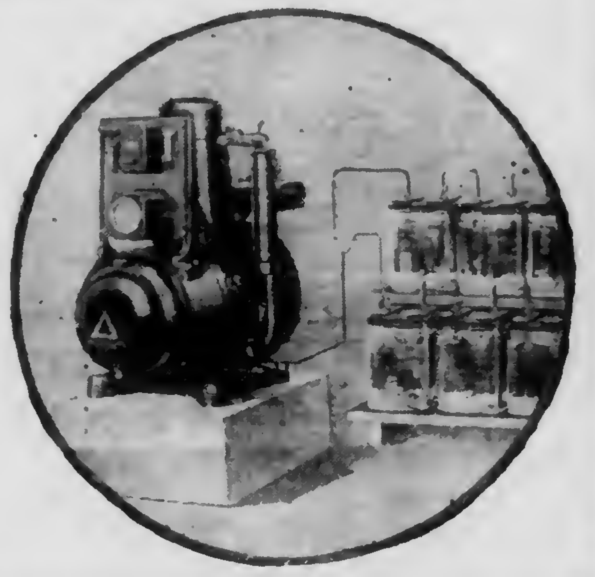

Markets

PHILADELPHIA PRODUCE

Philadelphia, Pa., Sept. 15, 1919.

As was reported in the columns last week, we have never seen the supply of nearby fruits and vegetables as light at this season of the year as they are at the present time. While these nearby vegetables are a little more plentiful today than a week ago, they are still less than requirements and more fruits and vegetables are being brought from distant points than is usual for this period of the year. Potatoes, corn, egg plants, peppers, squash, tomatoes and turnips being about the only products that are being supplied by nearby Pennsylvania and New Jersey growers and at least a portion, and in some cases all other fruits and vegetables, are being brought from distant points.

Vegetables

New Jersey and Pennsylvania are supplying practically all our potatoes at this writing and as they are more plentiful than they were a week ago lower prices are prevailing. Giants in 150-pounds sacks sold today at $3.25@3.65 per sack, while the cobblers or round stock sold from $4.25@4.50 per 100 pound sack. Most of the Pennsylvania potatoes are coming in bulk and these are selling mostly at $2.70@2.90 cwt., with some poorly graded as low as $2.50. Most of the potatoes hauled in by the nearby farmers are selling from $1@1.20 per ⅝-basket with No. 2's at 50@75c. Artichokes are scarce and ruling firm at around $10 per drum. The nearby green beans are selling at practically the same range as last week, viz: 50c@$1.25 per ⅝-basket. Some green beans are now coming from the Eastern Shore and these are bringing generally from $1.25@1.75 per hamper. Brussel Sprouts are very scarce and bringing around $10 a drum. Bunch beets are in light supply and meeting an active demand at 3@5c per bunch. The decline in the cabbage market as reported in these columns last week was followed by a still further decline later and when bottom was reached sales were being made at $30@35 per ton. At this lower price shipments were practically stopped and at this writing, with supplies much lighter, the market has reacted and today's sales ranged from $40@50 per ton. New Jersey grown cabbage today sold from 50@65c per ⅝-basket. Nearby grown carrots are not in active supply for the markets demand at 50@90c per ⅝-basket, and a few cars of New York State carrots have been here and selling around $1.50 per 100-pound sack. New York State is supplying most of the limited supply of cauliflower on our market which is selling at $3@3.50 per box. Fancy celery is firm and unchanged at 40@75c per bunch for N. Y. State stock while celery grown in Michigan is bringing from $1.75@2.25 per crate. Pennsylvania and New Jersey is supplying all the corn prices which is ranging from $1.50@3.50 per 100 ears as to quality. The only cucumbers now on the market are coming from New York State, best of which are selling from $2@2.50 per bushel with poor from $1.25@1.75 the dills sold from $2@2.75 per bushel. Egg plants are practically unchanged from last week and selling from 40@60c per ⅝-basket. Horseradish is in fair demand and about steady selling from $7@7.50 per barrel containing 100-pounds. The lettuce market shows some improvement over last week best selling today at $1.75 per box, with other sales ranging from 75c@$1.50 per box. The onion market is a trifle easier. Altho one car did sell today at $3.65@3.75 per 100-pound sack the great bulk of the sales were made from $3.25@3.50 per 100-pound sack White onions are lower by about 25 cents, selling generally from $1.50@2 per hamper. Lima beans are more plentiful than they were a week ago and prices are easing off today sales were made at $2.50@3.50 per hamper end $1.75@2.75 per ⅝-bas. While all offerings did not clean up and it looks as if prices might go still lower. Large okras are almost unsalable at 35@50c per basket, while the small okras are in fair demand at $1.50 per basket. A few Eastern Shore peas have been on the market during the past few days and selling mostly around $3@3.50 per hamper. Green peppers are about steady at 30@50c per basket, while red peppers are bringing from 60@85c per basket. Good radishes are selling at $2@2.50 per 100 bunches while poor ones are hard to move at any price. Romaine is in moderate supply and about steady at $1.25 per box. Squash shows little change from last week's price of 40@75c per ⅝-basket. There has been a decline in the tomato market of about 25@50c per basket. Strictly fancy tomatoes are now selling at $1.75@2 per basket, with ordinary tomatoes at $1@1.75 while the culls or No. 2's are bringing from 50@75c. Sweet potatoes are quite plentiful from both Eastern Shore and New Jersey, and the market is lower especially on the southern sweets. Best Eastern Shore sweet potatoes sold today at $3.50@3.75 per barrel with No. 2's and mediums at $2.25@3 per basket. New Jersey sweet potatoes are bringing from $1@1.15 per ⅝-basket for yellows, with the reds selling at $1.15@1.40 per ⅝-basket. The offerings of New Jersey spinach are very light, but there is a wide range in price, due to the wide range in condition. Best spinach is now selling around 75c@$1.25 per hamper and 25@50c for poor spinach. Turnips are a little firmer at 50@75c per ⅝-bushel basket.

Fruits

Altho there are still quite a few appples on the market from New Jersey, the greater part of the supplies are now coming from other points, such as Delaware, Virginia, Pennsylvania and New York state. There were 18 cars of apples at the depot this morning. The New Jersey apples sold today at $1@2 per ⅝-basket for fancy, hand-picked apples, according to variety, the red apples bringing the highest prices, while the green varieties sell lower. The market may be said to be holding its own on fancy red apples but ordinary red apples, and all green varieties are easier. Sales are being made at the following range of prices: Maiden Blush, $5@9; Grimes Golden, $5@8; Smokehouse, $4.50@7; McIntosh, $7@9.50; Jonathans, $9; Rebels, $7; Spys, $7; Hubbardsons, $6.50; Red Doctor, $7.50; Baldwins, $6.50; Alexanders, $6.50; Duchess at $5@7; Gravenstein, $6.50; Twenty Ounce, $6.50; Starks, $5@6.50. In bushel hampers sales are made as follows: Wealthy, $1.60@2.50; Alexanders, $2@3; Kings, $2; Blush, $2; York Imperials, $2.50; Twenty Ounce, $2. Box apples sold as follows: King Davids, $3; Jonathans, $3.25@3.50; Gravenstein, $2.75@3.50. Offerings of pears are light and strictly fancy stock is meeting a good demand as follows: Bartletts, $8@12; Bartletts, per bushel, $2@4.25; Seckels, $2.50@4.25; Sheldons, $3.25@3.50; Beurre Anjous, $2.75@3; Buerre Clarigeau, $2.75. Peaches are much more plentiful, there being about 12 cars of New York State Elbertas here this morning which sold at $1.75@2.50 per bushel. The New Jersey peaches are decreasing in supply every day, and sales are being made from 75c@$1.75 per ⅝-bushel basket. Plums are in moderate supply, but quality is not as good as might be with the result that lower prices are prevailing. Damsens selling at 50@65c per 4-quart basket and prunes from 45@60c. Grapes are higher under light offerings, Concords selling at 20@25c per pony basket. Niagaras at 23@25c, and Delawares at 23@25c. Concords in large baskets weighing around 16@30 lbs. are selling from $1@1.15 per basket. The season on New Jersey cantaloupes is over, and only far western cantaloupes are now on the market, which are selling at $3.75@4 per standard crate, with the small flat crates at $1.75@1.85 on white meats and $1@1.65 per flat crate on the pink meats. About the only berries now on the market are red raspberries from New Jersey which are selling around 12@15c per pint, and a very few huckleberries which sell up to 25@30c per quart. Watermelons are nearly done for this season, there being only three cars here this morning, one of which sold at $175, another at $225, and the third car at $275. New Jersey watermelons are mostly very poor and only bring from 5@20c apiece.

Poultry

The live poultry market is ruling very firm and prices are somewhat higher, especially on live fowls which are selling at 32@38c per pound according to quality and condition. Chickens are just about equal to demand in supply at 32@37c per pound. Old roosters are steady to firm at 23@25c, and ducks are showing little or no change at 25@30c per pound.

Eggs

There has been practically no change in the egg market since our last report, and prices have held firm on all grades with the advance last noted in these columns fully maintained on all strictly fancy eggs. The demand is sufficient to quickly absorb all offerings of strictly fine eggs and there is no surplus whatever on the market. Prices are ruling about as follows: Nearby firsts, 54c; nearby current receipts, 52c; fair to good and undergrades, 44@48c. Western eggs are selling at 54c for extra firsts, with firsts at 50@52c.

YORK PRODUCE MARKETS

York, Pa., September 15, 1919.

The depression noticeable for the past several weeks in the markets still continues. The showing of vegetables is small, yet there is a still smaller demand and produce goes at almost unheard-of prices. Potatoes have reached the $1.25 mark, and it is believed the end is not yet. It would seem that the agitation for lower prices was well timed to rut the prices just when the farmers are ready to clean up the season's harvests and the middle-man loads up for the winter way down, and later reaps the profits.

Eggs.—50 cents per dozen.

Butter.—Country, 50@55c pound; separator, 55@65c pound; milk, 10 cents quart.

Poultry.—Hens, 24@25c pound; springers, 24@26c pound; dressed, 75c@$1.50.

Vegetables.—Potatoes, 20@25c ½ peck; $1.25@1.75 bushel; cabbage, 2@5c head; lettuce, 1@5c head; beets, 5c bunch; radishes, 5c bunch; onions, 5c bunch; 20@25c ½ peck; lima beans, 30@40c quart; soup beans, 20@25c quart celery, 4@10c stalk; egg plants, 2@8c each; beans, 10@15c ½ peck; lard, 38@40c pound.

Fruit.—Apples, 12@40c ½ peck; plums, 7@10c box; peaches, 15c box; $1.75@2.25 per basket; cantaloupes, 2@8c each; watermelons, 10@15c.

Retail Grain Market.—Wheat, $2.40; corn, $2.25; oats, $1.01; rye, $1.65; bran, $3 per cwt; middlings, $3.50 per cwt.

Wholesale Grain Market.—Wheat, $2.25; corn, $2.10; oats, 86c; rye, $1.45; bran, $48 per ton; middlings, $70 per ton.

BALTIMORE PRODUCE

Baltimore, Md., Sept. 15, 1919.

Produce.—Potatoes, $2.50@4.50 cwt. Cabbage, nearby, $6@10 per 100. Lettuce, 75c@$1 basket. Onions, nearby, $3@3.50 cwt. Cucumbers, $2.25@2.50 bu. Carrots, 1@3c bunch. Lima beans, $1.50 bu. Beets, 2@3c bunch. Green corn 25@30c dozen. Tomatoes, 60@75c basket. Squash, 15@20c basket.

Fruit.—Apples, Maryland and Virginia, fancy, $3@4.50; Pennsylvania, $6@8 bbl.; Cantaloupes, 50@75c basket. Peaches, $1.50@3 bu.; 75c@$1.50 basket. Watermelons, $25@40 per 100. Pears, $2@2.25 bushel. Crabapples $1@1.25 basket.

Butter.—Creamery, western fancy, 58@59c; choice, 55@56c; pound prints, 59@60c. Nearby rolls, 46@47c. Dairy prints, 46@47c.

Eggs.—State, Pennsylvania and nearby, 52c; Eastern Shore and Virginia, 51c; Southern, 48c.

Live Poultry.—Springers, 33c lb.; old roosters, 21@22c; old hens, 33c pound; ducks, young 28c; do., old, 25@26c; guinea fowls, 90c@$1

Grains.—Bag lots by sample $1.90@2.30 Wheat new, No. 1 red $2.38¾; do., No. 3 $2.31¾; garlicky, $2.27¼. Corn not quoted. Oats standard, white 76¾@77c Rye, nearby, $1.45@1.50

Hay.—No. 1 timothy, $33@34 ton; do standard, $32@33 ton; light clover, mixed, $30@31 ton. Clover, mixed, $26@28. Tangled rye straw, $14.50. Wheat straw, $12@13 ton. Oat straw, $12@14 ton.

Mill Feeds.—Winter wheat bran, $63 ton; brown middlings, $63 ton; white middlings, $73 ton; Western spring bran, $46@47 ton.

NEW YORK PRODUCE

New York City, Sept. 15, 1919.

Butter.—Firmer; receipts, 12,051 tubs. Creamery, higher than extras, 58½@59c; creamery, extras, 92 score, 57½@58c; firsts, 52@57c; packing stock, current make, No. 2, 44½@45c.

Eggs.—Irregular; receipts, 14,945 cases. Fresh gathered extras, 55@56c; extra firsts, 52@54c; firsts, 47@51c; State, Pennsylvania and nearby western hennery whites, fine to fancy, 73@76c; state, Pennsylvania and nearby hennery whites, ordinary to prime, 60@72c; state, Pennsylvania and nearby hennery browns, 62@66c; gathered browns and mixed colors, 55@57c.

Cheese.—Weak; receipts, 2,994 boxes. State, whole milk, flats, current make, special, 30¾@31¼c; do., average run, 30@30¼c; state, whole milk, twins, current make, specials, 30½@31c; do., average run, 29½@30c.

Poultry.—Live, steady; chickens, 28@31c; fowls, 30@33c; old roosters, 20c; turkeys, 25@30c; dressed steady; broilers, 30@46c; chickens, 36@41c; fowls, 28@39c; old roosters, 21@22c; turkeys, 43@49c.

Vegetables.—Potatoes, Long Island, $5@5.50 per 165-lb. bag; Jersey No. 1, $3.75@4.25 bag; No. 2, $2. Beans, green, $1@2 basket; do., lima, $1.50@3 basket. Beets, $1.50@2.50 per 100 bunches. Carrots, $1@2 per 100 bunches. Cabbage, $4@7 per 100. Lettuce, 25c@$1 basket. Tomatoes, No. 1, $1@2.50 box.

Fruit.—Apples, Alexander, $4@7 bbl.; Maiden Blush, $4@6; McIntosh, $7@9; Wealthy, $5@7.50. Peaches, $2@4 crate; Jersey, $2@3 crate. Muskmelons, 25c@$1.50 crate.

PHILADELPHIA LIVE STOCK

Philadelphia, Pa., Sept. 15, 1919.

Receipts of live stock for week ending September 13 were as follows:

	Beef Cattle	Sheep and Lambs	Hogs
Total for Week	2,818	5,978	5,969
Previous Week	2,688	6,465	5,336

Calves.—Receipts of calves last week were 1,653 head against 2,033 head week previous.

Beef Cattle.—Steers and cows in moderate request and steady. Calves firm and higher, with demand absorbing the offerings of desirable stock. Steers, good to choice, $14.75@16.50; do., fair to good, $12.75@14.75; common to fair, $11.25@12.75; cows, fat, per lb., good to choice, cornfed, 8¾@10c; fair to good, 6¾@8¾c; do., common to fair, 4¾@6¾c; bologna cows, 4½@5¼c; calves, extra choice, $23@23.50; fair to good, $18.50@21.50; common, $12.50@16.50; heavy, $8.50@12.50; Tennessee, choice, $17.50@18.50; other southern, $9@13.

Sheep and Lambs.—Offerings of sheep were moderate, and the market ruled steady, with demand fair. Lambs were weak and lower, due to more liberal offerings, a light demand and increased pressure to sell. Sheared sheep, wethers, extra, $11@11.50; good to choice, $9.50@10.50; medium, $7.50@8.50; common, $3.50@5; ewes, fat, heavy, $8@9; spring lambs, choice, $17@17.50; medium $13.50@15.50; culls and common, $9.50@11.50.

Hogs.—There was little trading, and the market ruled weak and lower, due to bearish western advices, more liberal offerings and increased pressure to sell. Quotations: for best western, $20@20.50; nearby, good, $18.

City Dressed Stock.—Steers were quiet and unchanged. Heifers and cows were dull and easier. Hogs were also easier, with demand slow. Calves were in fair supply and demand, with little change in prices. Quotations:

Steers, 10@23c; heifers, 14@20c; cows, 10@16c; dressed, choice, 29@31c; country dressed, 25@28c; sheep, 20@23c; lambs, spring, 28@32c; hogs, 28c.

LIVE STOCK MARKETS

Chicago, Ill.— Sept. 15.—Hogs.—Receipts, 1,500; steady to 25c higher than yesterday's average; heavy, $16.25@18; medium, $16.75@18.25; light, $16.75@18.25; light light, $16.50@17.50; heavy packing sows, smooth, $15.25@16; packing sows, roughs, $14.50@15 pigs, $15.50@17.50.

Cattle.—Receipts, 2,000; compared with week ago. Choice yearlings steady; best heavy native steers, 50@75c lower; common and in-between grades, $1@1.50 lower; western steers mostly 50@75c lower; choice stock steady; in-between grades, 50@75c lower; canners, 25@40c lower; bulls steady; veal calves about steady; heavy calves, 50c to $1 higher; stockers and feeders 50@75c lower.

Sheep.—Receipts, 4,000, compared with week ago; killing lambs, 25c to 50c higher; fat sheep, yearling and feeding lambs mostly steady; breeding ewes unevenly 25c to 75c lower.

PHILADELPHIA HAY AND GRAIN

Philadelphia, Pa., Sept. 15, 1919.

Baled Hay and Straw.—Receipts, 168 tons of hay. Quiet and unchanged. Timothy hay, No. 1, $34@35; No. 2, $31@32; No. 3, $28@29; clover-mixed hay, light mixed $30@31; No. 1 mixed $29@30.

Straw.—No. 1 straight rye, $13.50@14; No. 2 do., $12.50@13; No. 1 tangled rye, $13@13.50; No. 2 do., $12@12.50; No. 1 wheat straw $13@13.50; No. 2 do., $12@12.50; No. 1 oat straw, $13@13.50; No. 2 do. $12@12.50.

Bran.—Dull and weak. Car lots, including sacks, soft winter bran city millls in 100 pound sacks, per ton, $50 western soft winter bran in 100 lb sacks per ton $47@48; spring bran, in 100 lb. sacks, per ton, $46@47c.

Corn.—Yellow, to arrive, $1.65@1.70.

Oats.—No. 2, white, 78@79c; No. 3, 77@78c.

NEW YORK HAY AND GRAIN

New York City, Sept. 15, 1919.

Feed.—The market for mill feed was dull and weak. The recent break in feeding grains has brought out larger offers of feed from the mills, but buyers showed little disposition to make purchases, as they apparently believe that further reductions will be made.

Quotations: City feed, bran, $47; middlings, $58 in 100-pound sacks; red dog, $69, nominal, in 100-pound sacks; Western spring bran, $43.50@44; standard middlings, $58.50@59; flour middlings, $63.50@64; red dog, $71, all in 100-pound sacks, 30-day shipment. Oat feed, $31; rye middlings, $52; white hominy feed, nominal, all in 100-pound sacks. Cottonseed oil meal, October shipment, $78.50; linseed oil meal, nominal, in 100-pound sacks.

Hay and Straw.—Offerings at 33d Street shed are ample for present requirements, trade is slow and market rather soft and rather tending downward. At Bushwick station there are heavy supplies, trade very slow and market in somewhat demoralized condition. State rye straw commanding $16 but Jersey stuff is averaging of poor quality and offering down to $14. Oat straw scarce.

Hay.—No. 1 large bales, $35 ton; No. 2, $31@33 ton; No. 3, $27@29; shipping $24@26 ton. Fancy light clover mixed, $31@33 ton. Clover, No. 1, mixed, $29@30.

Straw.—Per ton, No. 1 rye, $16; No. 1 oat, $14@15.

Wheat.—No. 2 red, $2.37½; No. 2 hard winter, $2.37½.

Corn.—No. 2 yellow, $1.55¾; No. 3 yellow, $1.55¼.

Oats.—No. 2 white, 77¼c; No. 3 white, 76c.

Rye.—Export, $1.53¾.

PHILADELPHIA DAIRY MARKET

Philadelphia, Pa., Sept. 15, 1919.

Butter.—The Produce Exchange was closed and there was little wholesale trading. Prices were nominally unchanged. Quotations follow:

Fresh solid-packed creamery, extra, 58½c; high-scoring goods, 59½@61½c, the latter for jobbing sales; extra firsts, 57½c; firsts, 53@56c; seconds, 50@52c; thirds, 48@49c; sweet creamery, choice and fancy, 60½@62½c; do., fair to good, 55½@59½c; ladle-packed, as to quality, 47@49c; packing stock, 45@46c; fancy brands of nearby prints jobbing at 63@65c; good to choice, 58@62c; fair, 53@56c.

Cheese.—Quiet and unchanged. New York and Wisconsin flats, current make, 32@32¼c; special higher; fair to good, 30@31c; jobbing sales of fancy goods, 33@34c.

NEW YORK MILK MARKET

New York City, Sept. 15, 1919.

The demand was more active in all parts of the city last week and surplus cut down to a small figure. The rate for September in 200 mile zone for 3 percent milk is $3.20 per 100 lbs.; 3.06 percent is $3.44 and the 4 percent milk $3.60.

Receipts of milk and cream in 40-quart cans for the week ending September 13, 1919 were as follows:

Railroad	Milk	Cream
Erie	42,425	4,916
Susquehanna	5,913	89
West Shore	15,872	2,075
Lackawanna	60,244	2,997
N. Y. Central (long haul)	139,714	3,042
Ontario	47,251	1,914
Lehigh Valley	46,582	1,284
New Haven	6,860	69
Pennsylvania	12,803	477
Other Sources	6,200	250
Totals	383,864	17,113

CLOVERSEED

Toledo, O., Sept. 13.—Cloverseed prime, cash, 1918, $30.35; cash, 1919, $30.50; October, $30.60; December, $29.60; January, $29.65; March, $29.80.

Alsike.—Prime, cash, $25.20; October, $25.50; December, $25.70; March, $26.30.

Timothy.—Prime, cash, 1917, $5.30; cash, 1918, $5.30; cash, $1919, $5.50; September, $5.50; October, $5.45; December, $5.55; March, $5.70.

TOBACCO MARKET

As usual at this time of year tobacco growers are entering the great guessing contest with Jack Frost. If the former win, the latter fails, and vice versa. Many crops are late and will be left in the field to profit by each succeeding day of grace. Upon the whole it is better to assume such chances, especially with a comparatively small and controllable acreage than to cut and house immature tobacco. However, much of the earlier planting has already been housed and is curing nicely according to reports but such early cutting will be comparatively light in weight and may net a smaller cash return than that harvested at a later date. Prices of the new product are now in the formative period, during which it is impossible to determine fair valuations. Meanwhile, growers should be on the alert as to the wily speculation. It was reported that as high as $20 per cwt thru was offered for some of the earlier crops. An unusual prevalence of rust has been noted in many localities, resulting in serious damage in some instances. Tobacco thus attacked is unfit for anything save the most common cigars. Reports from Ohio indicate that not to exceed 25 percent of a normal product is being harvested. The acreage was cut to 50 percent and dry weather has cut the product of this in the middle. The growers association here is yet holding a large part of the 1918 crop pending advances. In Wisconsin, too, the crop is late and short and with frosts ominous and north winds make the grower uneasy.

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of the ceiling; this was the dining room of the Regular parsonage as Grace saw it upon this, her first visit. The dust and cobwebs were, in her eyes, the only novelties, however. Otherwise, the room was like many others in Trumet, and, if there had been one or two paintings of ships, would have been typical of the better class.

"Phew!' exclaimed Keziah, sniffing disgustedly. "Musty and shut up enough, ain't it? Down here in the dampness, and 'specially in the spring, it don't take any time for a house to get musty if it ain't aired out regular. Mr. Langley died only three months ago, but we've been candidatin' ever since and the candidates have been boarded round. There's been enough of 'em, too; we're awful hard to suit, I guess. That's it. Do open some more blinds and a window. Fresh air don't hurt anybody—unless it's spiders," with a glare at the loathed cobwebs.

The blinds and a window being opened, more light entered the room. Grace glanced about it curiously.

"So this is going to be your new home now, Aunt Keziah," she observed. "How queer that seems."

"Um—h'm. Does seem queer, don't it? Must seem queer to you to be so near the headquarters of everything your uncle thinks is wicked. Smell of brimtsone any, does it?" she asked with a smile.

"No, I haven't noticed it. You've got a lot of cleaning to do. I wish I could help. Look at the mud on the floor."

Keziah looked.

"Mud?" she exclaimed. "Why, so 'tis! How in the world did that come here? Wet feet, sure's you're born. Man't foot, too. Cap'n Elkanah's, I guess likely; tho the prints don't look hardly big enough for his. Elkanah's convinced that he's a great man and his boots bear him out in it, don't they? Those marks don't look broad enough for his understandin', but I guess he made 'em; nobody else could. Here's the settin' room."

She threw open another door. A room gloomy with black walnut and fragrant with camphor was visible.

"Cheerful's a tomb, ain't it?" was Mrs. Coffin's comment. "Well, we'll get some light and air in here pretty soon. Here's the front hall and there's the front stairs. The parlor's off to the left. We won't bother with that yet a while. This little place in here is what Mr. Langley used to call his 'study.' Halloa! how this door sticks!"

The door did stick, and no amount of tugging could get it open, tho Grace added her efforts to those of Keziah.

"'Tain't locked," commented Mrs. Coffin, "'cause there ain't any lock on it. I guess it's just swelled and stuck from the damp. Tho it's odd, I don't remember—Oh, well! never mind. Let's sweeten up this settin' room a little. Open a window or two in here. We'll have to hurry if we want to do anything before it gets dark. I'm goin' into the kitchen to get a broom."

She hurried out, returning in a moment or two with a broom and a most disgusted expression.

"How's a body goin' to sweep with that?" she demanded, exhibiting the frayed utensil, the business end of which was worn to a stub. "More like a shovel, enough sight. Well, there's pretty nigh dust enough for a shovel, so maybe this'll take off the top layers. S'pose I'll ever get this house fit for Mr. Ellery to live in before he comes? I wonder if he's a particular man?"

Grace, who was struggling with a refractory window, paused for breath.

"I'm sure I don't know," she replied. "I've never seen him.

"Nor I either. Sol was so bad the Sunday he preached that I couldn't go to meetin'. They say his sermon was fine; all about those who go down to the sea in ships. That's what got the parish committee, I guess; they're all old salts. I wonder if he's as fine-lookin' as they say?"

Miss Van Horne tossed her head. She was resting, prior to making another assault on the window.

"I don't know," she said. "And I'm sure I don't care. I don't like good-looking ministers."

"Deary me! You're different from most females in this town, then. And you spoke of his good looks yourself this very mornin'. Why don't you like the good-lookin' ones?"

"Oh, because they're always conceited and patronizing and superior—and spoiled. I can just imagine that Mr. Ellery of yours strutting about in sewing circle of sociables, with Annabel and Georgianna Lothrop and the rest simpering and gushing and getting in his way: 'O Mr. Ellery, I did so enjoy that sermon of yours Sunday!' and 'O Mr. Ellery, it was so good of you to come this afternoon!' Pooh! I'm glad I'm a Come-Outer. Not that I would simper over him if I wasn't. He couldn't patronize me—not more than once, at any rate."

Keziah was greatly amused.

"Sakes alive!" she chuckled. "You're awfully high and mighty, seems to me. And changeable since mornin'. You was willin' enough to talk about him then. Now, Gracie, you mustn't take a spite against poor Mr. Ellery just because I've got to keep house for him. 'Tain't his faut; he don't even know it yet."

"I don't care. I know he'll be a conceited ittle snippet and I shall hate the sight of him. There! there! Auntie, you mustn't mind me. I told you I was a selfish pig. But don't you ask me to like this precious minister of yours, because I shan't do i.t He has no business to come and separate me from the best friend I've got. I'd tell him so if he was here—What was that?"

Both women looked at each other with startled faces. They listened intently.

"Why, wa'n't that funny!" whispered Keziah. "I thought I heard ——"

"You did hear. So did I. What do you suppose——"

"S-s-s-h-h! It sounded from the front room somewhere. And yet there can't be anybody in there, because——My soul! there 'tis again. I'm goin' to find out."

She grasped the stubby broom by the handle and moved determinedly toward the front hall. Grace seized her by the arm.

"Don't you do it, auntie!" she whispered frantically. "Don't you do it! It may be a tramp."

"I don't care. Whoever or whatever it is, it has no business in this house, and I'll make that plain in a hurry. Just like as not it's a cat got in when Elkanah was here this forenoon. Don't be scared, Grace. Come right along."

The girl came along, but not with enthusiasm. They tiptoed thru the dark, narrow hall and peered into the parlor. This apartment was dim and stilll and goomy, as all proper parlors should be, but there was no sign of life.

(Continued Next Week.)

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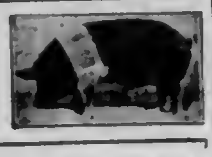

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NEW YORK GRANGE NOTES

New York patrons are planning to go to the coming session of the National Grange next November in Grand Rapids, especially many who were prevented from attending the session last year by the "flu" epidemic. State Secretary W. N. Giles is urging New York secretaries of subordinate granges to be sure that all dues to state grange are paid up by September 30, and not later than November 15, so that full representation may be had at State Grange, by selecting delegates at the rate of one for every 400 members and one for each fraction of 400 exceeding 200. Tho very urgent he does not aim to be arbitrary, but he does not wish a repetition of the incomplete representation of last year, due to unpaid dues. This is only a just measure and is very important as in these delegates is vested the chief legislative function of the Grange.

State Master S. J. Lowell has been very busy with field meetings about the state the past few weeks and will attend several field meetings in Massachusetts in August. State Lecturer Stewings goes to Connecticut on a similar errand this month.

Patrons everywhere are urged to visit the State Grange rest rooms at the state fair in Syracuse, September 8 to 13 and visit with members of the state committee who will be in attendance the entire week. An attractive Grange program will be put on during the week in these rooms, with addresses by Commissioner of Agriculture Wilson, Lieutenant Governor Walker, State Master Lowell and other well-known men. Special music by one of the subordinate grange orchestras of the state made this programs delightful last year and equally good features will be presented this year.

Home economics work by Granges has had very limited activity in most of the states in the past. The Eastern division of this work, consisting of the New England States, New York, New Jersey, Pennsylvania, Delaware and Maryland have had state home economics committees appointed. But only New Jersey and Pennsylvania have really accomplished anything strikingly successful. Miss Harriet Carpenter, chairman of the New York State committee in June mailed over 900 letters to subordinate and Pomona granges of the state with requests for the appointment of home economics committees. Only ninety-seven granges have replied, showing the general indifference to this line of work. In this state the home bureaus are doing splendid work. There are twenty-two counties that have organized and that support one, sometimes two specially trained home demonstrators. Granges co-operate with the home bureaus more or less and this seems the ideal way of getting this valuable work into the farm homes. The personal influence and magnetism of the trained worker who gives all her time to this work and who can really enter the homes and know her women accomplishes far more than any printed page can hope to do. The maintenance of the latter in Grange publications is a fine work and one that is being well looked after here. But this with a committee in each subordinate grange who will give a real home economics meeting in each respective grange at least once a year, is about the sum of activities along this line that can be hoped for just now.

Webster Grange, of New York continues to move up in membership and begins to look hopefully towards wresting away the title so long held by Houlton Grange, in Maine, as "the largest subordinate grange in the world." Present progress will soon put this grange's membership over the 1,000 mark.

Another wide-awake York State Grange is Burlington. This year it has purchased a home of its own, inspiring meetings are being held and all members responded heartily to calls on them for social service of every sort.

Hanover Grange has a live program issued for the year. Discussions of practical home and farm topics feature the meetings.

Kingsbury Grange believes in encouraging the talents of its young members. At a recent meeting a young man of sixteen years read an article telling of his experience and observations in his work with bees. It was of such merit that the August National Grange Monthly publishes it in full. This teaching of the boys and girls to express themselves is one of the grandest things accomplished by the order.

State Secretary W. N. Giles will be exceedingly busy from now on with his work in arranging for the wonderful county exhibits at the state fair, as indeed he has been all the season. The state fair commission allows each county exhibiting as much as is needed of a fund of $250 to cover the cost of assembling and staging the exhibits, which are planned to be educational in character, typifying the agricultural possibilities of each. Last year 16 counties made extremely interesting exhibits, and this year more will enter the contest. Three judges will vote the exhibits on a basis of 100 points. Of these 40 points will be given to the correctness with which the exhibit typifies the agriculture of the county; 30 to quality of material exhibited; 10 to educational features of the exhibit; 10 to decorative arrangement; and 10 to diversity of exhibitors. Diplomas of merit and cash prizes of $200 each, to be given farm bureaus, are awarded the best ten exhibits.—M. G. F.

SUCCESSFUL SHEEP SALE

The second annual sheep sale held at the Fair Grounds in Frederick, Thursday, August 28, under the auspices of the Frederick County Sheep Growers' Association was most encouraging in its results. All of the sheep brought good prices and were bought by an interested and good-sized crowd. Prices ranged from $11 to $25 a head according to size and quality. Among the heavy purchasers were Baxter Horine, Burkittsville; Thomas Chiswell, Dickerson Station; Charles Joy, Libertytown; W. J. Grove, Buckeystown; Chas. Werthelmer and Albert Schyoler of Frederick. Several were purchasers at last year's sale. One man said his original investment was fully returned in the sale of wool and lambs this spring.—E. O. J.

STATE CATTLE REGULATION

The Bureau of Animal Industry of the Pennsylvania Department of Agriculture has formulated new interstate cattle regulations effective August 15, 1919. These regulations cover the importation of cattle for slaughter, feeding or entry into dairy herds. Complete rules may be obtained by addressing State Veterinarian, Harrisburg, Pa.

Abundant roughage helps out on the grain bill. Lay in a good supply of hay this summer.

Veterinary

Conducted by W. C. Fair, V. S.

Advice thru this department is free to our subscribers. Each communication should state history and symptoms of the case in full; also the name and address of writer. Initials only will be published. We cannot make reply by mail. This is one of the most valuable columns of the paper and we invite readers to make use of it. Clippings from this column, when properly preserved and classified, make one of the most valuable medical symposiums a farmer-stockman can obtain.

Lamenitis (Founder).—We have a six-year-old horse that slipped his halter some five weeks ago and he had access to a large bin of corn. Doubtless he ate quite a lot of it, but we were careful about watering him next day. Since then he is stiff in fore legs, but not so bad that I can't work him. A. G. H., Caledonia, Pa. It is now perhaps too late to effect a permanent cure, but if you will shoe him with wide webbed (fore) shoes with plenty rolling motion, and stand him in wet clay 2 or 3 hours daily he will soon show improvement. If his fore hoofs are dry and hard, apply any one of the commercial hoof ointments that are regularly advertised in this paper.

Bunch on Right Flank.—I have a cow with bunch on right flank, about 6 inches in diameter and stands out about 3 inches. Have done nothing for her and I might add, she changes very little. It has been on her for the past 18 months. I forgot to say the bunch is moveable. J. S. S., Lumberville, Pa.—Altho the bunch is quite large it can be cut out without any particular risk. Clip hair off and paint it with tincture of iodine daily, this will check its growth and perhaps reduce it in size, but soon as cool weather sets in cut it out, or open it up freely.

Dairy Question.—I have a Holstein cow that gives a nice suppply of milk, but we are unable to churn the cream, it seems spongy and foamy and what butter we do make it bitter and hard to gather. Let me know what to do for her as she is kind and gentle and would hate to sell her. She is a young cow, had only one calf. W. H., York Springs, Pa.—Change her feet, give her a teaspoonful of hyposulphite of soda at dose in feed twice a day. Is her water supply of good quality? Her udder should be washed clean, milking utensils kept clean, milk cooled quickly after milking and keep it in a clean cool place. Get in touch with a good butter maker and don't forget to clean and disinfect your cow stable, if she is milked in it. It is good practice to give such a cow one pound of epsom salts in 3 pints of water as a drench, one dose only.

Scurvy.—Several of my pigs are troubled with some kind of a scaley or scurvy skin ailment, but they do not change much. So far as I can tell they are growing nicely. What kind of a home remedy can I apply? W. G. L., Kennard, Pa.—Apply one part kerosene and nine parts Petrolatum to scurvy portion of body 3 times a week. If you will apply one part coal-tar disinfectant and thirty parts water to diseased portion of skin once a day it will have good effect. If the pigs have a wallow, mix your coal-tar disinfectant in it, but a 2 percent solution is strong enough. It will do no harm to alternate the remedies.

CONDITIONS IN CARBON COUNTY

Almost all plowing done for winter grain. Farmers having a hard time to get seed wheat and rye as almost all the grain here sprouted in the shock. One farmer had 14,000 sheaves of grain out in a week of rainy weather and all of it was ruined as far as selling it was concerned. Seed wheat is selling at $3.25 and up. It is very dry at present making plowing a difficult task. The potato vines are nearly all dead and prospects for a short crop. Selling at present for $1.25 at the consumers door. Tomatoes sold as low as 35 cents a half bushel basket. Very plentiful north of Hazleton but not many are grown here. Cabbage will be a poor crop unless rain comes soon. The writer, with five other farmers from this county, attended the tractor demonstration at Harrisburg, August 12 and 13. All were impressed by the showing made.—Walter S. Bittner.

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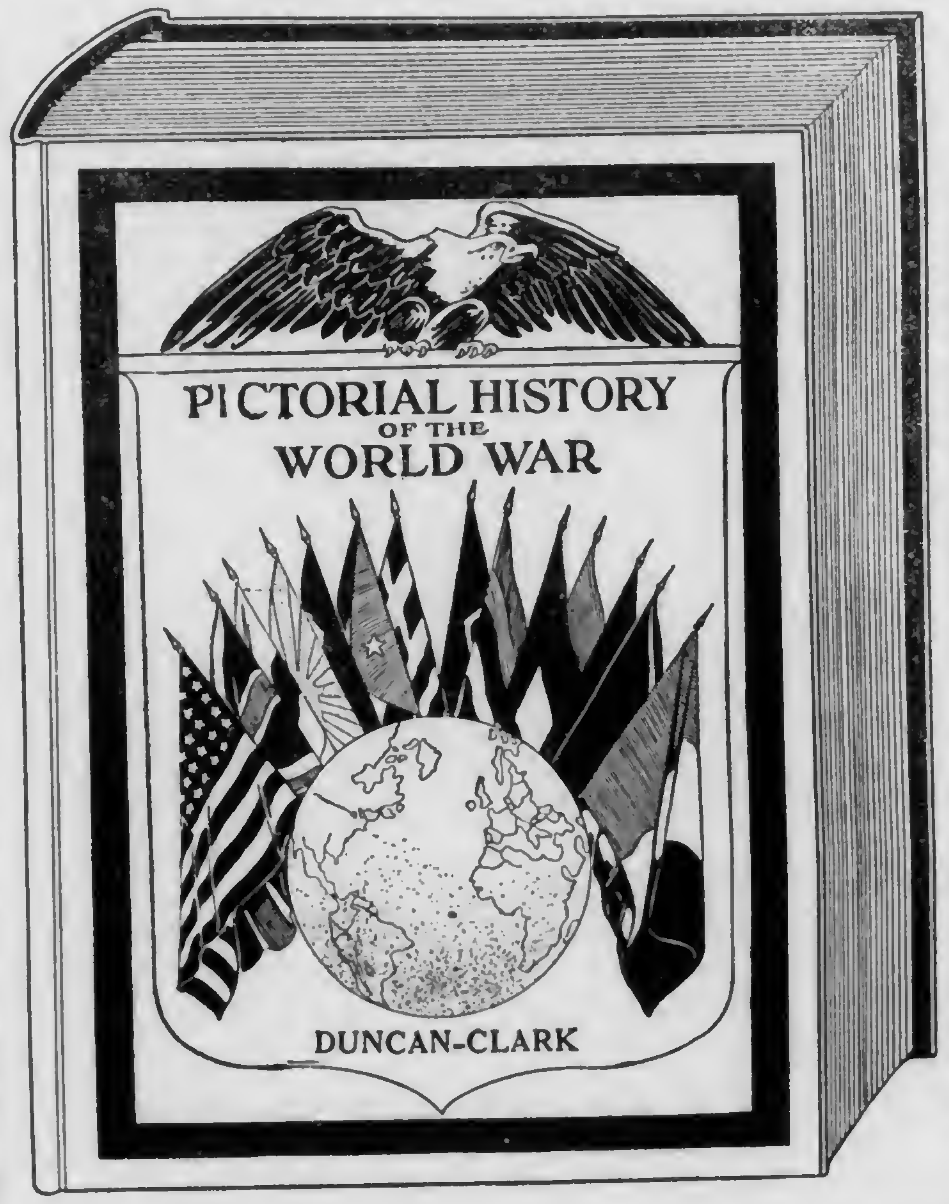

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By GUY C. SMITH

DIRECTOR

"What is the Pennsylvania Bureau of Markets going to do?"

This is the question that has been asked many times in the last few weeks of the State Secretary of Agriculture, and the recently appointed Director of the Bureau of Markets. It is to be hoped that readers will appreciate the fact that at the time this is written the new Director has been on the job about two weeks, and, therefore, that any program as outlined here must be more or less tentative until the needs and problems of the farmers of the state are better known.

Probably everyone appreciates the fact that this bureau was established by the Legislature of this state to assist farmers, as well as the general public, to get at the forces which underlie the distribution of food products, and to assist in any way it can to make that distribution more efficient and economical. You can state the whole problem very glibly in a few well chosen words. The fact remains that it is a very big contract, and the man who signs the contract, thereby agreeing to give his best efforts in helping to solve the problem, has assumed a very heavy responsibility.

The new Bureau of Markets has begun its duties in the midst of a most disturbed period. There is a general impression that the times are out of joint. Living conditions are difficult to say the least, and the public is demanding that the situation be righted. With respect to food products the agitation has been fanned into a white heat. "Profiteering" has become a word to conjure with. Most alarming "discoveries" are being reported of food hoarded or wasted. As to who the profiteers are there is the greatest divergence of opinion. Boil it all down and it would appear that everyone is profiteering but "me." Farmers say it is the middlemen who are to blame. Middlemen say it is the farmers. Consumers say it is both farmers and middlemen, with cold storage companies and others thrown in. We might just as well set it down as a fact that we are usually suspicious of any line of business which we do not understand.

If a man builds a house, and when it is done he decides that the roof is too high from the ground, it would perhaps be possible to load a great weight on it to force it down, but that method would certainly make great havoc with the structure upon which the roof rested. And yet, that crude illustration fairly well describes what the public is trying to do today. The fact is that the prices of food stuffs are high today for much the same reasons that clothing, shoes, machinery, real estate and most of the other things that we need are high. That is to say, during the last few years we have been building conditions which made a high roof necessary. We cannot destroy great quantities of goods and appalling numbers of human lives, we cannot divert our productive forces to the making of destructive materials, we cannot cut down our hours of labor, without paying the bill. We are paying that bill today. We shall be paying it for several years to come in one form or another.

These things are not being said to create a "smoke screen" behind which the Bureau of Markets can hide, but they are being said because they are true, and a more general recognition of their truth would help the world conditions, of which our conditions in this country are only a part.

Steps have already been taken to aid in every possible way agencies of government, whether federal, state or local in their effort to get some relief from present conditions, but it is impossible to say how much can be accomplished in this direction.

It will be the steady purpose of the Bureau of Markets not to tackle any piece of work until it knows enough about the conditions surrounding it to act with a reasonable amount of intelligence. This may result at times in what appears to be unnecessary delay, but in the long run results ought to justify such a policy. What we need in these matters are facts, not someone's pet theories, and still less can we profit by hair-brained imagination for we are dealing with forces that affect multitudes of people in many different places and conditions.

Entrance to New York State Fair Grounds—Arch Dedicated to New York State Soldiers and Sailors Who Gave Their Lives to the Cause of Humanity

City Markets

There is one piece of work already launched which ought to give a valuable beginning. The Bureau, cooperating with the city officials in Harrisburg, has begun a study of the distribution of food products in this city for the purpose of getting at the facts regarding the situation. We hope to ascertain what methods are most efficient, and what are wasteful and expensive. The public should be informed as to the necessary steps and costs of getting products from producer to consumer. Whether it is being well done or badly done, all should know the truth, and in the long run all should profit by it. The man who declines to make clear these things about his business immediately invites suspicion in such times as these.

Without going into tiresome details it may be said that this study will concern itself with the sources of the city's food supply, the methods by which it is distributed, something about the costs of distribution; the relation of farmers, dealers, hucksters and consumers to the public markets; the part which cold storage plays; and many others phases.

Farmer's Cooperative Associations

There is a large number of groups of farmers in this state which are buying and selling as cooperative associations. Most of them are not "honest-to-goodness" cooperative associations. This is not because the members do not want them to be, but because the corporation laws of the state did not provide for all the conditions which make for true cooperation. For example, under the old corporation laws each share of stock is entitled to one vote. This method of voting has been the undoing of many a farmer's organization because it has enabled interested parties to buy up the stock and control the association in a way which was not to the interest of the majority of the members.

At the suggestion of Secretary Rasmussen a most excellent law has been passed. It provides for the incorporation of agricultural associations without capital stock, and not conducted for profit. Each member has one vote and only one. It, also, has other advantages. The fact that these associations cannot have capital stock in no way prevents the raising of capital of any amount necessary to carry on the business of its organization. The California Fruit Growers' Exchange is organized on this basis, and does a business of about $40,000,000 per year. There is probably not a better law of its kind in the United States. Every association formed under this act must use the word "cooperative" in its name and it is illegal for any organization not formed under this act to use the word "cooperative" in its name, unless it secures permission by special law.

One of the functions of this bureau is to advise farmers in the formation of such associations, and it is prepared to do so. A bulletin explaining the necessary steps to be taken under this law is now being prepared. Requests for such assistance have already come in. It is important that these associations should be formed on a sound basis. It is better not to organize at all than to do it in a slip-shod manner. The old maxim which says "It is better to be safe than sorry" certainly applies to cooperative organizations.

Market Reporting

During the last two or three years experiments have been tried out in reporting some of the fruit and vegetable markets around the country. These reports had a two-fold function. One was to keep city consumers informed as to supplies of products in the markets together with the wholesale prices at which they were selling. An effort was made to inform them when the height of the season approached for the canning of fruits and vegetables. This information was printed daily by the local papers. The writer had the supervision of this work for four cities in Connecticut, and knows that it was followed by hundreds of housewives.

Another phase of these reports was designed to keep growers informed of the condition of demand in the market, and the wholesale prices which were being received. This was valuable in several respects. It enabled the small grower who came to market only once or twice a week to know enough about the condition so that he could not easily be taken advantage of by buyers better informed than he.

We are not willing to say definitely that this work will be undertaken next season, but if there is sufficient interest in it, it will be carried out so far as the limited funds at the disposal of the bureau will permit.

Standard Containers

The law authorizes the bureau in cooperation with the Bureau of Standards to promulgate rules governing standard containers for farm products. Plans for this work have been pretty well matured so far as certain kinds of fruit baskets are concerned. All such rules take effect six months after they have been promulgated. Anyone who has observed the great variety of sizes of fruit and vegetable containers in our markets must be impressed with the need of doing away with some of them. The U. S. Bureau of Markets is working on this matter, and our own bureau is cooperating with them and will make its regulations as far as possible coincide with those of the Federal Bureau in order that there may not be conflicting rulings in effect. Here again we must proceed with caution in order to make sure that in attempting to improve the present conditions we do not make them worse instead of better.

Standardization of Products

A few years ago one would scarcely have dared to mention the idea of grading and standardizing farm products for fear of being laughed out of court. But times have changed, and our most progressive farmers today are giving attention to this subject because experience has shown them that in normal times it is to their financial advantage to do so. Only this week a lady in a certain Pennsylvania city wrote to this office stating that she is buying eggs from her local dealer, and finds from one to six rotten eggs in every dozen, tho she pays the price of fresh eggs. The dealer refuses to make adjustment, for he says that he is selling them just as he receives them. Without attempting to argue the merits of the woman's claim against her dealer, or as to whether or not it is fair or even good business for him to operate on that basis, the fact is that bad eggs are brought into the market and sold. The farmer who brings them in may figure that he is making money by selling his bad eggs at the price of good ones. It probably has not occurred to him that he is constantly injuring his market by selling a bad product. To be sure, this may be an extreme case, but the fact remains that it is an actual one, and there are thousands of dozens of eggs put on the market which never ought to go on. The consumer pays the loss whether she buys the eggs or whether the middleman sorts them out and throws them away. Certainly it cannot be suppopsed that dealers are going to pay as much for eggs of questionable reputation as they are for eggs that are guaranteed fresh. This case has been taken as an illustration, but the principle applies to all other farm products.

Corn Husker and Shredder in Operation

The foregoing outline will serve to illustrate in a limited way the plans of the Pennsylvania Bureau of Markets. Rest assured that it will not be our whole program. But after all, there is only one party who can solve the farmer's marketing problems, and that is the farmer himself. This bureau can help him, but in the main the actual solution rests with him. Our program will be developed by conferring with farmers, the specialists of the Pennsylvania State College, county agents, and others who are interested. We cannot make this bureau what it should be without the wise counsel and support of all. Being human, we shall make mistakes. Tell us about them so that we shall not make them a second time. We are not afraid to face our mistakes, and criticism will make us grow. But being human we shall also be glad to know when we have done a thing right. That will strengthen us.

Among New York Farmers

The Talk of the Field

But what are farmers doing outside of the farm and what are they talking about? For a while it is Daylight Saving, but that is settled, and I have yet to find the man who regrets that next year there will be no setting ahead of the clock. Now the farmers are talking about organization. The Dairymen's League, the Farm Bureau, the Grange, the local cooperative, and what not. It is organization that occupies the farmer's mind when he is not thinking about the farm.

The Dairymen's League seems to be progressing. Everywhere I go there is talk of some phase of the work. I have been to a number of meetings, know a little something of its progress, its personnel, and its activities, but I am quite ignorant of its daily routine. Yet I am a booster for the League and its officers. I have seen much good already resulting from its work and I have got to take off my hat to them for the way they are picking up the good men around the state. The League seems to recognize that success depends largely upon the personnel of the organization, and they are taking the good men from the colleges, farm bureaus, dairy industry and the like. They have started well for a winning race.

The increase in Farm Bureau Organization in the past year shows again how organization is coming to the front. In Erie County, for instance, the membership has jumped from 600 to 2,000, and there have been similar gains in other counties. The Farm Bureaus are showing their colors more than ever before. In some counties farmers are beginning to talk of organizations even broader than the farm bureau. They realize that the Farm Bureau is limited in its scope because it is supported by Federal, State and County funds. It is not permitted to enter the commercial field and in the last three or four years many emergencies have arisen where individuals of the Farm Bureau have acted to buy or sell some special product to protect the farmers of the county. In Otsego County, a County Chamber of Commerce has been formed and Floyd S. Barlow, the former Farm Bureau Agent, has become its secretary. I do not know what the activities of this organization are to be, but it is clear that it will have difficulty escaping those things that a Farm Bureau is not allowed to do.

In Tioga County, N. Y., the farm bureau agent is said to have been active in organizing the Owego Chamber of Commerce on very broad lines. Farmers all over the county have the privilege of joining, and membership dues are graduated according to the size of business of the individual. Thus, a farmer with a gross income of $5,000 may become a member and have as much voice in the affairs of the organization as a manufacturer in Owego who has a gross income of $100,000. If the Chamber of Commerce starts a campaign the farmer who is a member has something to say regarding the form of the campaign. In other words, the people of Owego show that they recognize their dependence upon the farmer and they have set out to work with him instead of against him or without him.

It is surprising how many farmers are stirred

(Continued on Page Ten.)

NEW YORK'S BIG STATE FAIR

An Event That Brings Together the Best Farmers and the Things They Produce

The New York State Fair at Syracuse during the week ending September 13th was not a record breaker, either in attendance or number of exhibits. The state has spent millions of dollars in erecting buildings and equipping the grounds, but this has failed to attract such crowds as attend several of the other large agricultural exhibitions. The largest day's attendance was 48,064 on Thursday, while on the leading day of the Nebraska State Fair nearly twice that number entered the gates. The total attendance of less than 200,000 was not large in comparison with the Iowa State Fair's 406,185, and the 725,000 of the Toronto show; nevertheless it has never been exceeded but once in the history of the fair.

The exhibits were of an unusually high quality, and were arranged more with a view of giving instruction and demonstrating their practical value rather than for show and for prizes.

Twenty different makes of tractors were entered in the tractor demonstration and there were 38 machines in the tractor exhibit. The tractors attracted a large crowd of farmers and many orders for these machines were taken. The number of tractors sold in one day was more than half the total number of sales made at the fair last year.

Near the tractor demonstration a hay pressing contest, participated in by nine machines, drew the attention of many farmers. A motor cultivator show was one of the new features, indicating the improvements being made in tractor machines for all kinds of farm work.

The relative importance of the dairy industry as compared with beef cattle raising was not shown in the cattle exhibit, there being nearly as many animals of these breeds as of the dairy breeds. The Jerseys led in number with 224 entries, closely followed by the Holsteins with 218 entries, Ayrshires with 187 entries, and Guernseys with 123 entries. Of the 504 entries in the beef cattle classes, 184 were Shorthorns.

The New York State herds were exhibited by counties. Prizes were offered for collections of fifteen animals of each of the dairy breeds. In this special county exhibit seven counties contested with Holstein herds, three with Jersey herds, four with Guernsey herds, and three with Ayrshires.

One of the interesting features of the cattle exhibit was a judging contest, under the direction of the State Department of Farms and Markets. Nine cows were exhibited in the contest. These cows are owned by various state institution farms. They have similar breeding and have been handled along the same practical lines. They have been fed alike. Each cow has taken up the same amount of stable room and practically the same amount of labor has been expended on each. Their yearly milk production varies from 4,454 pounds for the lowest producer up to 20,852 pounds for the highest producer. The cows were numbered from one to nine with the number posted on the stanchion. Every one who wished to participate in the contest was given a card containing the milk record of each cow opposite a blank space for the number. It was left for the contestant to write the number of the cow opposite the number of pounds of milk which in his judgment the cow produced. One thousand dolllars in prizes were offered for the best judging. Several thousand men inspected the cows and filled in the cards.

The sheep exhibit was strong in quality, but considering the increasing interest in sheep thruout the East it was something of a disappointment to those who had expected to see the largest sheep show ever held in the state. The Shropshires led in numbers, with the Wardwell, Hutchings and Larkin flocks in strong competition. The Merinos, usually strong, were represented by only two flocks. Some fine animals of the Karakul breed were shown. Four Karakul lambs were sold during the fair to the manager of a large sheep farm in Norway for $10,000, and will be exported to that country.

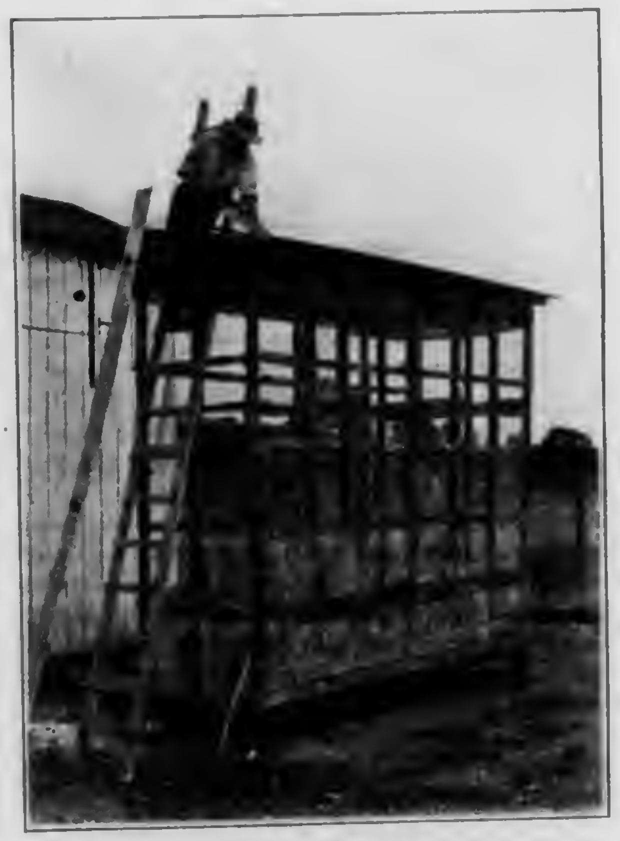
The Berkshires were well represented in the Swine show, with six exhibitors, closely followed by the Poland Chinas and Duroc Jerseys. It has been many years since the Poland Chinas have been so strongly represented in New York State. This big lard type breed, so long the Middle West favorite, is gaining many friends in the East, who recognize in it some excellent qualities not possessed by other breeds.

The show of farm, breeding and draft horses, one of the best ever seen at the New York State Fair, was distinctively an Eastern exhibition. Of the 49 exhibitors, 46 were from states east of Ohio. The Percherons outnumbered the other breeds, but there were many high quality Belgians, Suffolks and Hackneys.

New York is no longer the leading butter and cheese state. The demand for market milk has made heavy inroads upon these industries. Nevertheless the butter and cheese exhibits this year were probably never equalled at any former fair. The big cheese, an annual feature of the Dairy exhibit, was larger than ever, weighing 6,813 pounds. One day's milk from 3,568 cows, a total of 71,000 pounds, were used in making this cheese, yet typical of the dwindling cheese industry itself, it was small compared with the huge 31,964 pound cheese recently produced by a Wisconsin factory to be exhibited at the coming National Dairy show.

Daisies Grow Where Grass Was Pastured Too Close in Fall

This is a poor year for fruit in New York State, but this fact was not in evidence in the Horticultural building. Charles G. Porter, who has charge of the exhibits, told the writer that this year's exhibit was the best ever made at the state fair, in quantity and quality of fruit and general display. A few years ago there was considerable agitation in favor of the box apple package, and box exhibits were very prominent, but the barrel is still the popular package for apples as was shown by the large display of barrel fruit.



Rat-Proof Corn Crib of Heavy Wire Screen

The County Farm Bureau exhibits occupied a large building, and attracted much attention. This new feature of the fair has grown to such an extent, however, that only a part of the counties could be given space in the building. Cayuga County was awarded first prize, with Chemung second and Steuben third.

Grange Day is the big outstanding event of the fair. The seating capacity of the Grange building auditorium was filled an hour before the speaking started.

An attractive feature of the fair which drew large crowds was a little country theatre at which one-act plays were given by young people from Cornell University, many of whom came from the farms. The plays were chosen because they were interesting, not wholly for the lessons they taught, and were practical for presentation by inexperienced performers who are willing to give a little time to their preparation. Commissioner Charles S. Wilson has become much interested in the possibilities of developing community dramatics and it was the purpose in presenting these plays at the state fair to interest the farm folks in this form of wholesome amusement.

The horse show, poultry and pet stock show, the Americanization pageant, and many demonstrations of farm machinery and new methods of performing farm and household operations all helped to educate as well as entertain the fair visitors.—E. E. R.

PASTURING THE YOUNG CLOVER FIELD

When the grass in the pasture fields and cutover hay fields gets short in the late summer or early fall it is a great temptation to turn the cattle into the young clover in the wheat stubble fields. In many cases light pasturing is a real benefit to the future hay crops, as the plants will die if allowed to go to seed the first year, a thing that will sometimes happen with alsike clover. Yet it is often a fact that the cattle are left on the young clover too long and the plants are eaten to the very surface of the soil. This is far worse than when not pastured at all, as the vitality of most of the plants will be insufficient to carry them thru the winter. Heavy pasturing will seriously endanger the chances for a crop of clover or timothy the next summer, yet the weeds seem to thrive better than ever. At this time it is well for the farmer to keep close watch on the young clover he is planting and see that it is not eaten too close or the result is liable to be like that shown in the photo on this page, a nice clean field of daisies ("white top") with only a few timothy and clover plants scattered here and there.—C. Randolph Kahler, Lycoming Co., Pa.

A GOOD MOVE

Several of the English counties prohibit under heavy penalties the disfiguring of fences, country buildings, and other places with advertising signs. They do this on the two-fold ground that such doings disfigure the landscape and offend the good taste of most people. They are right. There is something deeply offensive to see some spot naturally beautiful to the eye and refining to the senses made hideous by some loud-appearing advertisement.

And as for returns, it is the poorest kind of advertising. No doubt many who resort to it have the idea that because a man can be hired for a day or two to go around with paint and a paintpot and write execrably about the virtue of some patent medicine warranted to cure all the ills that mankind is heir to, or the iron clad qualities of some articles to wear, that it is very much cheaper for him and that the financial returns are better for him than if he had put a local or display ad in his home paper. But it is a costly mistake which most business men have in the long run realized. All things considered, there is nothing in advertising that pays like an attractive, well-written announcement regularly inserted but occasionally changed as to wording, and which appears conspicuous in the paper that the people contiguous to one's place of business read. And in so doing, the business man also escapes the reproach of offending good taste by disfiguring the scenery.

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Member Standard Farm Paper Ass'n and Audit Bureau of Circulations

PHILADELPHIA, PA., SEPTEMBER 27, 1919.
VOLUME 46 NUMBER 13

Our job is to serve our readers. Whenever and wherever we can help you, write us.—The Editors.

Exchange of Opinion

THE chief ways in which we may broaden our vision of life are: experience, observation, and the exchange of views with others. It is in the latter method that a newspaper may lend its aid, and Pennsylvania Farmer welcomes and invites free and honest expression. The following is extracted from a letter from a woman in an inland city in New York state, renewing her subscription because she likes to read "the other point of view."

"I enjoy reading the letters from subscribers because it gives a broader understanding to see the thing from the other fellows point of view. I do not agree with the average farmer's picture of the city man. In the first place, city people's salaries are not what they seem after the necessary taxes or rents, and living expenses are paid. The mechanic who is getting the high wages is employed only part of the year. To encourage the farmer's wife I will say that the city man's wife also works from morning until late at night; that is, she who is intent on helping her husband stretch the small income. I know, for I am one of them and might as well live in the country for all the entertainments, etc., I can attend. We have two small children and a house and garden to take care of. We never buy anything we can make ourselves, so are continually busy, and being busy, are contended. In New York state, the average farms and buildings never looked so well kept as now. I think a little less greed on both the farmer's and the city man's side would settle the unrest. Your editorial, "Hoarders," is right as far as it goes, but there must be a limit even to storage. If the consumer should not buy a hundred pounds of sugar at a time, why let the speculator buy and store with a view of getting a corner on the market? Please pardon me for having my say, but we must have a safety-valve or burst at times with thoughts of the injustice of it all."

We call that a good letter. It is an expression of the innermost self and was not intended for publication; but it has so much of the human element in it that we give it for its intrinsic worth and to encourage others to make like confidences. No matter where we live, life has its complexities and the mere business of making a living has its trials and worry. All these might be less if we had a better understanding of each other and the other fellow's business. If we had this, we would have more charity and consequently more enjoyment in life.

The Foreign Demand

IN commenting upon the probable foreign demand for American food products the Department of Agricuture figures that, with the exception of pork, the exports will decrease from this time on. European countries are slowly getting back upon their feet, and this with the cessation of destruction and the necessity for the strictest economy will lessen the immediate necessity for importation on the scale of the past two years. The five-year average is thought to be sufficient acreage for wheat, which would be about 85 percent of the acreage of 1917 and 1918. It would seem that this advice, coming out as it does just now, is rather belated for winter wheat growers. It will require some time for the countries of Europe to revive their dairying to a pre-war basis, but consumption of milk and its products is falling off from lack of money to purchase it even at the sacrifice of life and health. Last year's exports from this country were so large that it required two billion pounds of milk to make the products, or about 100 pounds from each cow in the United States. If the cost of production remains at its present height and if the exports fall off materially it will naturally "bear" the market here and will necessitate the adoption of the best possible business methods in dairying in order to maintain the business in its present condition.

WILL YOU HELP?

From letters received we find there is general interest in the following subjects, and we have found from experience that the best place to get satisfactory information is from our readers. Will you not tell your experience for the benefit of those seeking knowledge on:

What success has your community had with community or co-operative spraying outfits?

How successful have community trucking and marketing routes been?

What kind of house heating plant did you install, and with what success?

Have you found milking machines a satisfactory help in solving the labor question?

Was your poultry business profitable the past year, and what plans have you for the future?

Information on any of these subjects will be highly appreciated by inquiring readers.

National Board of Farm Organizations

THE Fall meeting of the National Board of Farm Organizations was held in Washington, D. C., September 16-17. As the President had just published the names of the delegates for the forthcoming labor conference to be held in Washington in October, the disproportionate number of farmers named was a major subject for discussion and action.

Direct appeal to the President for greater representation than the three delegates allotted them by the President's program for the conference was decided upon after a committee of the farm board had called upon Bernard M. Baruch who has been in Washington for several days and is understood to be in close touch with the President.

Action of the farmers in placing the matter squarely before the President was the result of a resolution adopted by the board, contending that the organizations represented by the board and speaking for 8,000,000 farmers were entitled to representation at least equal to that accorded organized labor.

The farmers' organizations were allotted only three delegates, one each for the National Grange, the Farmers' Union and the National Equity Society. The American Federation of Labor was called upon to name fifteen delegates, the United States Chamber of Commerce five, the National Industrial Conference Board five, and the Investment Bankers' Association two. In addition President Wilson proposed to appoint personally fifteen members to represent the general public, making a "round table" conference of forty-five members.

Senator Capper, of Kansas, delivered a speech in defense of the Capper-Hersman bill, which specifically allows, within certain limits, collective bargaining among farmers. Under this bill, Senator Capper said, co-operative buying and selling agencies could be established, and as long as the farmers made legitimate use of these channels thru which to do their buying and selling they could not be molested by the authorities.

Mr. Capper said the farmers had not been given a square deal. Unwittingly or otherwise, they had been treated in many cases as enemies of their country and there was an effort even now to saddle them with responsibility for the high cost of living.

"Farmers are in no sense responsible for the high cost of living," said Mr. Capper. "Collectively and individually, they are the most patriotic of all our citizens. They never strike. Forty percent of the nation's population is engaged in agriculture, yet there is a distinct tendency in some quarters to give the industry a subordinate place among the useful occupations of the country. This always has been the case, and always will be, I fear, until the farmers themselves, thru organized effort, demand and take their rightful place in the sun.

"The Capper-Hersman bill, allowing collective buying and collective selling by the farmers, is in no sense a measure releasing them from submission to the laws which forbid combinations in restraint of trade. The combination which this permits is a combination to enhance trade and make more easily the transference of products.

The Chamber of Commerce scheme for private ownership of the railroads under strict government regulations was presented to the conference by Mr. Post.

The convention adopted resolutions indorsing the equal suffrage amendment to the federal constitution, the right of farmers to bargain collectively and the regulation of the packing industry.

Another question which created a great deal of interest and discussion was the proposed control of the meat packing industry. Mr. Culver of the Federal Trade Commission showed some startling situations in address before the convention, and the delegates were unanimously of the opinion that drastic legislation is necessary to proper regulation.

Senator Lenroot explained the provisions of his bill for the disposition of the railroad problem. Altho the other bills were discussed and Mr. Plumb was personally present in defense of the bill introduced by him, the members of the convention seemed inclined to favor the Lenroot plan. It provides for the return of the roads to the owners with no dividend guarantee.

About 200 delegates from different parts of the United States were present and the business was conducted in a harmonious spirit. More detailed discussion of the most important features will be discussed in later issues.

Pulling Chestnuts From the Fire

THE women's organizations of the county have a potential value that is often overlooked. The women have made greater strides in the last generation in the study of economic and social questions then have men as a class, and this knowledge is beginning to bear fruit in legislation and other ways since woman's advent into politics. The address of the President of the National Consumers' League at the meeting of the National Board of Farm Organizations on the mischievous influences of the classes standing between the producers and the consumers is said to have been one of the best things of the meeting.

But like men's organizations, they may sometimes be misled. There was received at this office a circular news letter bearing the card of the Woman's National Economic Committee, with the title, "A Whip Cracker for the Farmers." This letter states that there is a growing conviction among farmers and stock raisers that the Kenyon bill for the regulation of the packers goes much farther than is supposed; that in reality it contains a "joker" which will apply to farmers and farmers' organizations and make a license to do business necessary. Besides this, it will subject the farmer to all kinds "nosey agents," prying into his business.

It looks to us, if there is a boni-fide organization of that name, that the committee itself is the "cracker," and it is being used by somebody for the furtherance of selfish propaganda. Under present conditions the arguments fit in well with those coming from other sources. Women as well as men should think twice before they agree to pull chestnuts from the fire.

HARRISBURG LETTER

Much Wheat Seeding.—If reports coming to the State Department of Agriculture are correct there will be almost as much wheat sown in Pennsylvania's wheat raising districts as last year, altho in the state at large there will doubtless be a decline due to dissatisfaction with the price conditions, preference for corn as a better paying crop, the discouraging effect of pests and other causes. Rust and other pests combined to reduce the yield in many sections of the Keystone State this year and prevented what was close to one of the finest grain showings ever made by this mining and industrial commonwealth. But apparently the good hard sense of the Pennsylvania farmer is causing him to turn again to the staple grain and there has been an immense acreage plowed up, a good bit of it by tractors.

After the Borer.—Pennsylvania officials will cooperate with officers of the national government and other state governments in fighting the corn borer. This pest, like the brown tailed and gypsy moths, seems to have appeared in New England and preparations have been made to fight it at its present location and prevent appearance in this state where corn raising has taken on a spurt and likely to produce big paying crops. The borer is a cousin to others better known to Pennsylvania farmers and is particularly destructive. In some sections where studies have been made it has been known to do immense damage in a short time.

The Potato Wart.—Agricultural experts believe that the potato wart has been brought to a standstill in the hard coal region and that with a good concerted effort it can be stamped out. Some very gratifying results have been obtained in sections of Luzerne and Carbon counties, but the human equation is always present and it will take months before any definite statement can be made. The state for the first time secured an arrangement whereby the potatoes would be dug in one week and this has been pretty well observed.

Call for Reports.—The Department of Agriculture is making a special request for information on crop reports as it desired to see how Pennsylvania has met the demand for food in the disturbed year following the war year when the greatest production known was attained in many counties. This information is being asked for government use as well so that there may be first hand data on which to make estimates and issue reports.

Organizing Time.—State officials were at Washington the last week attending meetings of agricultural bodies and report that there is much activity in organizing, especially co-operative buying and selling concerns. In this state the policy in regard to agricultural associations has been defined and there will be a number formed which will work in conjunction with the Bureau of Markets.

Educational Congress.—State conferences of doctors, men connected with the various safety and inspection agencies of the state and men handling farm problems are to be followed by an educational congress for Pennsylvania in November. This gathering, arranged by Dr. Thomas E. Finegan, the new State superintendent of public instruction, is primarily to find out what is the matter with Pennsylvania's school system, especiallly in the year following the war. The governor will take an active part and there will be big men from every walk of life: business, railroading, manufacturing, farming, professional and other branches to express their views, what they have observed in the young people coming out of the schools, what seems to be needed and how to get it. In many respects the conference will be unique and as plain speaking will be desired there will be some interesting developments. In all probability the financial end will also be discussed, altho the congress is more to be devoted to the fundamentals and to see what specialization is needed. The budget making will then follow.

New Bureaus.—In this connection it is interesting to state that the educational department is being overhauled from cellar to attic and that there will be radical changes launched soon. One of the first steps taken has been to get the attendance in better shape as it has come to notice here that there are actually districts in Pennsylvania where, because of rows among directors, pupils did not get any schooling at all one year and that in others due to an almost similar cause the term was much curtailed. Attendance is said to have been rather irregular in many districts last year, especially in the country, which may have been due to lack of teachers. In any event an effort to find out what is needed to correct is to be undertaken immediately.

Waste.—The inauguration of a state policy against waste is under way at the capitol. The State Department of Agriculture is out with an appeal to farmers and orchard owners to prevent loss in dropped fruit and to get the value, now that prices are good, of produce allowed to rot and not even gathered for hogs. The Public Service Commission has issued several sharp decisions against waste of water, current and other agencies of public service, even calling the United States army to account for a leakage of half a million gallons a day. The State Fire Marshal is out with a call to cut down a preventable fire loss of over $15,000,000 last year and the Highway Department is objecting to careless handling of road improvements and loss of material. While there may be some who do not agree that the state is as economical as it might be in business methods it must be admitted that something is being done to cut down loss where it can be prevented.

GUY C. SMITH
Chief of Pennsylvania's Market Bureau

Road Situation Bad.—Owing to the price and labor situation and the difficulty of obtaining certain cars from the United States Railroad administration the general highway situation is not as hoped by state officials. In some sections contractors were hampered by weather to an unusual degree. In others they could not get the right kind of labor and when they did it would not always stick. There are almost 200 contracts under way in Pennsylvania now but the progress will not be what was anticipated.

Less Poultry.—It is feared that there has been considerably less poultry raised this year than formerly and that weather conditions have worked against the fowls in many sections. The prices have been attractive and there will be brisk selling of the birds rather than feed them over the winter. Many of the so-called "chicken factories" have fewer chickens than usual.—Hamilton, Harrisburg, Sept. 22.

NEW YORK LETTER

College Registration.—The opening of the school and college year shows record enrollments of freshmen in our colleges. Syracuse University, not our largest college, but one coming into prominence, expects to register 2,000 freshmen. The entrants in home economics courses are unusually large everywhere. It is of significance that one of the leading state normal schools of the state out of 84 new entrants has but one young man. The teaching profession is not an attractive one for men today, as compared to others, a great pity as every high school and most of the grammar schools should have a man at the head.

Draft Horse Exhibit.—Belgian day at the draft horse show at the fair brought out the finest show of this type horse this fair has ever seen. A notable class was that of five stallions from each of three exhibitors, bringing into the ring fifteen celebrated horses, the best in this country. First prize went to Erwin Snyder of Indiana second to Dennison farms, Buffalo, third to Gallup and Warner of Montezuma farms, N. Y., Delchester farms won the championships in Percherons.

Power Parade.—On Thursday at the fair 35 models of tractors in a series of maneuvers held the attention of a throng of farmers. At a power parade that day, 20 tractors preceded by an automobile carrying the director of the State Department of Farms and Markets, Calvin Huson and F. G. Behrends, superintendent of farm machinery, gave exhibition of practically all the leading types of tractors. After the parade the 20 tractors held a contest in plowing equal areas of land. At the close of this there was a hay baling contest participated in by nine American made machines. This was followed by a motor cultivator show. The machines showed great improvements over those shown last year and sales were far larger—running well over $100,000. The attendance at the fair went over 60,000 over the total of the week of last year.

State Floral Societies Demand New Horticultural Building.—The tenth annual meeting of the New York State Federation of Floral Clubs and Horticultural Societies held at the fair demanded a new horticultural building as the next to be erected on the fair grounds, pointing out that the state leads in fruits, flowers, vegetables, seed, bee and nursery stock interests and deserves better facilities at this great exposition.

Recent Crop Outlooks.—A federal crop inspector recently visited Cortland County cabbage fields and said they were by far the best in the state or as far south as Florida. The crop is 7,000 acres short of last year's plantings, and is far below normal in most of the state. Southern county and Long Island growers look for $70 a ton. Domestic cabbage is now bringing $35 per ton at car tracks in central counties. No Danish has yet been cut. Kraut factories were unable to contract with growers and are left to the open market which is now as high as $45 per ton in some places. Last week central New York growers shipped 145 cars of lettuce out of a total of 152 for the entire country. The crop is ahead of last yesr's but is still 100 cars short of last year's total. Recent rains have caused a heavy loss in onions by rot on Long Island and nearby fields, which were depended on to offset unpromising conditions elsewhere. The rot is increasing and there is now no telling what the final yield will be.

Milk Probe Notes.—Retention of the council of farms and markets to act in an advisory capacity and to direct the policy of the State Department of Farms and Markets was urged this week by Datus C. Clark, a Peru farmer of note, who served on the milk investigating committee last winter. This policy was recommended by him in the inquiry being conducted by George Gordon Battle, recently appointed by Governor Smith as a special investigating committee to inquire into the affairs of the Department. Mr. Clark also urged improved transportaion facilities between farm districts, and the cities as a means of reducing the cost of milk and other farm products. At the investigation held in Glens Falls early this year he said his committee found that one milk firm was charging 3 cents a quart more for milk in that city than it was in Hudson Falls, a short distance away, because local producers sold milk in the latter place at fair prices. Mr. Baute, in his capacity of investigator of investigations, seems obsessed with the idea that the farmers are the only ones to blame in the present situation, despite direct testimony recently collected, showing that farmers are getting but 40 percent of the retail price of milk and the dealers 60 percent. How long will the public be victimized by farces of this nature?

NEW JERSEY NEWS

Cranberry Crop Good.—The cranberry crop in New Jersey is good and is now being picked. It is said that the crop is far better than was expected, it being felt some weeks ago that the rains had caused heavy damage to the berry. Late tomatoes are advancing fairly well but are a little late, while sweet potatoes in various sections of the state are very good. Much plowing has been completed and sowing will be started within a week or so. There is not much of an apple crop this year.

Grangers Exhibit Foodstuffs.—Lawrenceville Grange held an exhibition of foodstuffs and vegetables. Cash premiums and ribbons were awarded to the winners in the various exhibits. All of the exhibits created much interest among the large number present. The exhibits were auctioned off and brought good prices. Those attending the exhibition heard a lecture on woman suffrage by Miss Jessie Buchanan, well-known in the movement in the state.

County Agent Changes Position.—After having served as county farm agent for the Mercer County Farm Bureau for two years, Frank A. Carroll, has accepted a position as county agricultural agent and manager of the farm bureau of Berkshire County, Mass., and has left Trenton for the Down East City. Mr. Carroll came to Mercer County from Delaware, and his work here was regarded as valuable to the farmers. A successor has not yet been appointed.

Demonstrates Poultry Culling.—Victor G. Aubry, extension specialist in poultry for New Jersey, gave an interesting culling demonstration at the Allinson Farm near Yardville to a large number of poultrymen. He told those present that the culling of a flock of poultry resulted in two definite economical factors: namely, the saving of the best birds for breeders and elimination of the boarder or non-laying hens. The demonstration was conducted in cooperation with the office of the Mercer County Board of Agriculture and proved to be instructive to a high degree.

Scarcity of Hay From Flooding of Big Meadows.—Users of hay in Morris and Essex Counties are seriously affected by a tremendous loss of hay from floods in the lowlands in that part of the state, and it is expected that because of the loss of the product for cows, there will be an advance in the price of milk there. Owing to heavy rains in July the hay on the meadows bordering the upper Passaic Valley has all been destroyed for feeding purposes. The greater part of the first cutting of upland hay—timothy and red top—was harvested as was the first and in some cases the second cutting of alfalfa. The rains also caused the spoiling of much alfalfa and the clover rowan which follows the timothy on many fields in and around the Passaic Valley. Since rowan and alfalfa both require longer curing than do the lighter fodder crops, much that was cut in pleasant weather is now rotting on the fields.

ROOSEVELT MEMORIAL

A Roosevelt Memorial Asssociation has been organized and subscriptions to a fund will be taken during the week of October 20 to 27 of this year. The object of the fund is: "To provide memorials in accordance with the plans of the National Committee which will include the erection of a suitable and adequate monumental memorial in Washington, acquisition, development and maintenance of a park in the town of Oyster Bay which may ultimately, perhaps, include Sagamore Hill, to be preserved like Mount Vernon and Mr. Lincoln's home at Springfield." For full information address Roosevelt Memorial Association, Madison Avenue, New York City.

Another indication of what organization does for farming: The Cayuga County (N. Y.) Sheep Breeders' Association has sold the wool produced by its members at prices five to eight cents better than the dealers have been paying.

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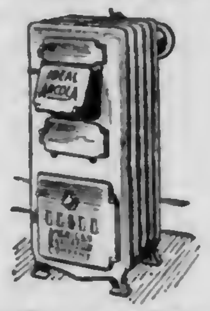

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HORTICULTURE

National Vegetable Growers Meeting

Forcing down the prices on food products without materially reducing the cost of other necessities of life will produce a food famine in this country in less than two years. One unfavorable season for field and truck crops will hasten the crisis. Without labor, truck gardeners cannot continue in business. With the cost of every necessity of life advancing, it is difficult to secure labor on the farms at the wage the farmer is able to pay out of the returns he receives for what he has to sell, and a cut in food prices alone would make the obtaining of labor an impossibility.

These are some of the points brought up by C. W. Waid, of East Lansing, chairman of the committee on arrangements for the eleventh annual convention of the Vegetable Growers' Association of America, opening at Detroit on Tuesday, September 9, and they seem to reflect the sentiments of five hundred of the largest growers of vegetables in the United States.

According to Mr. Waid: "The majority of the truck farmers are located near large industrial centers. During the war factory production increased enormously, big wages were paid, and the labor that had been used upon the farms went into the cities. With only such workers as they had in their own families, the farmers cut down their acreage. Many of them gave up vegetable growing because they could not make a success of it. Such land as was near a rapidly growing industrial region was sold because real estate speculators offered big prices for it. In Wayne County alone, where a large portion of the vegetable crops for the Detroit market are grown, the vegetable growing area has been reduced more than twenty-five per cent since 1917. The only solution of the high cost of living problem is for the farmers and consumers to get together and agree to wait until conditions become somewhat near normal. Farmers are not organized as are the manufacturers of other commodities. That has been their weakness. A careful comparison between the increase in the cost of food products and other necessities of life wil show that the farmer is the least to blame for the present cost of living."

The arguments advanced by speakers at the Tuesday afternoon session of the convention were for the adoption by the farmers of the country of the same business principles as are the foundation of every successful industrial or commercial enterprise. Organization for better sales and distribution to help both producers and consumers. "Cooperation Among Producers" was discussed by Hale Tennant, in charge of the Government and State Cooperative Work in Michigan.

"Owing to the fact that your program is well-filled," said Mr. Tennant, "I shall confine my remarks to the point.

"Years ago we in Southwestern Michigan began in a blind way to cooperate, and we found that the sales and distribution systems in use at that time were very poor, and that whenever we had a large supply we were sure to find our markets in a demoralized condition. In those days we had no assistance other than copying our ideas from other districts where conditions were not applicable to our district. We made many mistakes because we did not know how to manage our business efficiently.

"The principal thing that we did was to secure more efficient distributon and spread our shipments just as the orange people have done so successfully. The great secret of our success was that we were able to get the best sales talent and correct distribution evils. Our next problem was that of standardizing the size of our baskets, and thru a series of years' work we got the type of basket we now use. Then we secured more uniform grading and more efficient inspection, partly thru our own efforts and partly thru legislation governing the shipment of fruit unfit for consumption.

"In any cooperatve marketing undertaking you can't make it profitable to go to the trouble of putting up standardized products in small volume. For a few cars of grapes it will not pay to go to the expense of standardizing the fruit, but when you can handle grapes in large volume it will bring repeat orders and build up a trade in the big markets. Then if you put your fruits or products in the best markets and get the best dealers to take hold of them you must have standard goods in large volume. I feel that some day you will all see the importance of standardized goods in sufficient volume to meet the competition from larger organizations. I feel that you must also have prestige and financial strength, coupled with the other considerations mentioned if you make a complete success. A cooperative organization to live must not smack of the old-time idea of profits; if it has stock that pays interest it cannot be strictly cooperative. As these movements grow larger it is important that they be formulated with great care so that we will not be compelled to do the things all over at some time in the future.

Dorr D. Buell, president of the Michigan Potato Growers' Exchange, spoke upon the subject of "A Producers' Organization that Cooperates." In explaining the growth of the Michigan Potato Growers' Exchange, Mr. Buell showed a map illustrating the different associations that belong to the Exchange. The Exchange began business less than a year ago with twenty-eight associations and it now has increased its membership to seventy-eight, and several more are almost ready to join. Of these new associations some are county organizations that operate at several loading stations.

"You might think from our name," said Mr. Buell, "that we handle nothing but potatoes, but as a matter of fact we market all of the products that our farmers care to sell

(Continued on Page Nine.)

THE SWELL DAIRY FARM

Every once in a while these days we read about a very fine dairy. Certain cows have made records that are to be envied. They really have made them, too. The owner has the farm equipped with every sort of a modern help to the men who run the dairy barn and care for the products. The buildings are of the very latest design and are fireproof and rat proof and dirt proof—almost.

But I have learned to look a little further in these cases. The average farmer—and I am one of them—can not hold this sort of a farm up as an example to follow. This farm is not the result of brains and experience and hard work but is simply bought with plenty of money. I could go out and in a month have as fine a herd of Jerseys or Holsteins in my farm as one could wish for—if I had the money to spend for just what I wanted. But we ordinary farmers do not have it and so we plug along as best we can and get a cow or two at a time until we have a herd that really means something to us.

There are farmers, of course, who have started farming with almost nothing and have the finest producing herds in the county or state. I know some of them and I have a lot of respect for what they have to show. It is these men that I keep in mind as I farm along with the dairy cows in my mind. These men earned what they have and they know how they got it.

There are dairies that have been bought outright, or have been inherited from other owners, that are doing good work and they are an advantage to the community and country in which they are located. Any good cow is an advantage. The visiting of such a herd is an inspiration to most of us and we come home resolved to get rid of the scub we have at home. But it means a sacrifice at certain times and so we wait. That is necessary, as there are times when one would lose a good bit of cash by selling. However, the idea can be kept in mind and the sale made when it is to the best advantage.

I wish that when our farm journals gave us a page article about some large and successful dairy they would mention whether this dairy was earned by its owner, or was bought by money made in some other line. I believe it would add to the interest of the article and I know it would add to the confidence of the reader. The dairy that is owned for the pleasure of owing is indeed an advantage to any community. Better stock will be introduced and unless they are of too high a class, some of the offspring wil find its way in the surrounding herds and better cows will be the result.

I am not trying to belittle such herds as I have mentioned but I am trying to emphasize the importance as examples of the farmer who has built up a herd from his own efforts and they are doing something in the line of making records that is counting. That is what means something to me. The same thing is true of other lines of farming, of course, but I am just bringing up dairy herds because it seems to be a little more prominent now than most other farm lines.—Earl Rogers.

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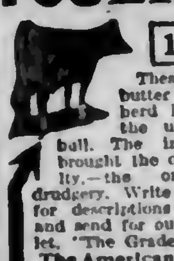

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DRESHER MOTOR CO., Lansdale, Pa.
H. C. WOOD, Trenton, N. J.
C. T. WOOLSTON, Riverton, N. J.

floor is cleaned easily and when one has a litter or manure carrier the job of cleaning out the barn is a pleasant one instead of being the worst thing connected with dairying. The litter carrier, like everything else made out of steel, has increased in price during the last few years but the increase has not been in proportion to the dairy receipts. I have always found that the main trouble with farmer dairymen was that they did not have a good place to keep their cows, and that the place they did have was hard to clean and so did not get cleaned enough.—L. F. S.

A DAIRYMEN'S PICNIC

One of the most successful Dairyman's League Picnics held in Pennsylvania was held at Harford on August 20. It was a joint picnic of the Dairyman's League and Grange, held in cooperation with the Farm Bureau. There were 3,000 people in attendance.

The program consisted of a tractor demonstration in the morning. There were five tractors present, the Cleveland, 8—16 I. H. C., Titan, Fordson, and Waterloo Boy.

The next was a Bull Show. Susquehanna County has done more for improving the breeding of live stock than has any other county in the United States in the past two years. The Farm Bureau has organized six Bull Associations, including 24 bulls, at an average price of $1,000 apiece. These bulls include some of the best bred bulls in the county, 20 of them being purchased from the best and most noted herd in the country.

The organization of a bull association consists in locating four bulls in one vicinity, four or five farmers cooperating to own one bull; then, every two years these bulls are passed around. So, for one investment the practical farmer can have the use of a good bull for eight years. For instance if four farmers purchased a bull together, in this association for an investment of $250, they can have the service of a $1,000 worth of bulls.

The meeting in the afternoon was a big success. Mr. Kirkland, director of the Dairyman's League was there and gave us a splendid talk on the necessity of more thoro organization and support of the League. Henry Jeffers, president of the Walker Gordon Farms, was present and gave a splendid talk and boost for Susquehanna County. He said "Our County was more nearly free from disease than any other place in which he bought cattle."

The closing feature was a championship ball game, all farmers and Dairyman's League members. It was a ten inning game, championship going to the Western part of the county.

RAISING CALVES ON WHOLE MILK FARMS

Whole milk is nature's balanced ration for the young calf and should be fed during the first ten days or two weeks. Whole milk, however, contains the valuable constituent, butterfat, which goes into the manufacture of the most highly priced dairy products. When the selling price of butterfat is from 50 to 60 cents a pound, it is not an economical practice to feed calves with whole milk over very long periods. Neither is it necessary to feed whole milk in large quantities for success in raising good calves. Skimmilk differs from whole milk only in its lack of butterfat. The food value of fat can be substituted in the form of grain at much less expense, and experience has shown that calves will make practically as good growth with skimmilk, hay and grain, as with whole milk.

A calf that is equally as good as one nursed by the mother can be raised on skimmilk at a great saving in the cost of feed. Experimental work has shown that two pounds of grain will replace one pound of butterfat as an energy-producing food for the calf. Butterfat is worth 50 to 60 cents a pound while a grain mixture suitable for use as a substitute costs not more than three cents a pound. The economy of using skimmilk in place of whole milk is evident. To the farmer who makes butter or sells cream, the problem of calf raising then should be a comparatively simple one because of the available skimmilk which he has for feeding purposes.

It is readily recognized that at present prices of dairy products, dairy calves cannot be fed economically on whole milk over a long period. It is also true that approximately 45 percent of the dairy cows in the United States are found on farms producing whole milk for condenseries, cheese factories, powdered milk factories and for the market milk trade. On these farms the milk brings a high price; in many cases $3 or $4 a hundred pounds—sometimes more.

A calf requires an average of about 15 pounds of whole milk a day until four months old. This amounts to 1,800 pounds. If valued at even such a low price as $3 a hundred, the milk alone costs $54. This does not include the cost of hay and grain consumed in addition to the milk.

Farmers making a business of selling whole milk do not have skimmilk for feeding purposes and the common practice is to kill the bull calves at once or sell them for veal. Unfortunately, too often the heifer calves are also disposed of in the same way. In such cases the herd must be replenished by buying mature cows.

Three general plans are open to the farmer who sells whole milk and at the same time raises his heifer calves. First, he may feed the calf a minimum amount of milk and some grain. Sufficient milk must be supplied to give the calf a good start. It has been found by experiment with a group of calves at the Illinois Station that the minimum amount necessary is 152 pounds of whole milk, and 435 pounds of skimmilk. Second, give the calves whole milk for a short time, after which they may be changed to a ration of calf-meal gruel or so-called "milk substitute." Fair success has followed this method. Third, give the calf a good start on milk, then take the milk away at the end of about two months and put the calf on a hay and grain ration. Fair success has been obtained with both the second and third methods. A discussion of these two methods is given in a circular which will be sent free on request.—Missouri Circular.

EXPORTING AYRSHIRE STOCK

During the past several weeks there have been a number of exportations of Ayrshire cattle. One shipment went to Nicaragua, Central America; one to Japan, and three have gone to the Virgin Islands.

NATIONAL VEGETABLE GROWERS MEETING

(Continued from Page Six.)

thru the Exchange in carloads. When we were starting last year we had some staggering problems to face, but our people have stood by us from the beginning. Different men have so much different conception of what a good potato is like that it has greatly complicated our marketing problem. It has been our aim from the beginning to standardize our potatoes and to that end we have decided upon one variety, the Petoskey Golden Russet, as the ideal potato for our soil and climate, and at present more than seventy-five per cent of our growers are planting this variety. In some of the counties in the Northern Peninsula the Green Mountain reaches a higher degree of perfection than the Petoskey Russet.

Howard W. Selby, of Springfield, Mass., had for his subject, "Cooperation in New England," which he handled as follows: "In order to give you a clear idea of the way cooperation has developed in New England it will be necessary for me to go back about six years and tell you about how the people of that region have cooperated to the end that agriculture might prosper. In the first place, the business men have given hearty cooperation to the farm bureau movement. Taking the viewpoint of a business man, who said in regard to the county agent work: 'What can one man do in a county?' So there developed the Hampden County Improvement League, which employs from ten to fifteen men to look after the agricultural affairs of that county. And as this work has been going on in the New England states where the agricultural possibilities are so limited it has been found that it pays. Our work in helping growers market their products in the industrial centers without waste in transportation and distribution charges has helped the growers to develop their business and correlate their interests. One business man said regarding the falling off in the number of dairy cows in Massachusetts that we could send to New Hampshire and Vermont for our milk, but a survey that we made of those two states showed a marked falling off in the number of cows being milked. After we made a report of the survey to him he agreed that something must be done to stimulate an interest in dairying and cause our farmers to see the profits. As a result of making a careful study of the dairy situation in New England we prevailed upon the officers of the National Dairy Show to come to Springfield, and nearly a million dollars was spent in housing it.

"The failure of local organizations as we analyzed it has been due to the fact that many managers have been engaged on half-time, and no man can be a great success when he is making a plaything or side line of your business. Many organizations have not been financed properly to secure the full advantages of cooperation in buying. In selling many farmers follow the lines of least resistance by going to his fellowmen and saying: 'Why should I sell the cooperative organization when the local buyer is paying the same price?' Our farm bureaus are doing a grand work but they are handicapped because they cannot aid the farmers in entering into collective bargaining."

Stewarts haul the load for less
---Less in first cost
---Less in running cost
---Less in time lost

5 SIZES
¾ Ton Chassis
1 Ton Chassis
1½ Ton Chassis
2 Ton Chassis
3½ Ton Chassis

ALLEN MOTOR CO.
10th & Hamilton Sts.
Allentown, Pa.

GOMERY-SCHWARTZ MOTOR CAR CO.
128 North Broad St.
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IRON CITY MOTORS CO.
5914 Penn Ave.
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Stewart construction is simplified by eliminating all needless parts giving you a more economical truck and saving you considerable in first cost.

This means real economy in operation---less weight to wear tires and consume gas and oil.

Stewarts overcome the shortage of help. The time they save in hauling can be given to other farm duties. Good profits can be made from neighborhood jobs.

An example:

1½ Years' Service, Nothing but Satisfaction

"The Stewart Truck, Model No. 8, I purchased of your dealer Feb. 14, 1918, has given the best of satisfaction up to present date."
(*Signed*) PHILIP KIEFER,
Gardenville, N. Y., April 22, 1919.

Stewart's constant reliability is proved in over 500 American cities, hundreds of up-to-date farms and in 27 foreign countries.

In 5 Years No Stewart Has Worn Out

Stewart MOTOR TRUCKS
STEWART MOTOR CORPORATION BUFFALO, N. Y., U. S. A.
Write for free booklet, "HOW TO CHOOSE A MOTOR TRUCK."

R. K. TIRES
ARE FIRST CLASS

First class materials, plus first class workmanship, makes a first class tire. Retreaded, then double chain stitched—the treads and casings the best possible. We know that every tire will do better service than you expected of it!

Guaranteed, of course—even at these little prices:

Size	Price	Size	Price
30x3	$6.50	34x4	$11.00
30x3 1-2	7.50	34x4 1-2	12.50
32x3 1-2	8.00	35x4 1-2	13.00
31x4	10.00	36x4 1-2	14.00
32x4	10.00	35x5	14.00
33x4	10.50	37x5	14.00

Add $1.00 to the above for Non-Skid Tire
2 percent off for cash with order.
10 percent deposit required with all C. O. D. orders.

R. K. Tire Company
837 No. Broad St., Philadelphia, Pa.
Send for descriptive booklet and price list.
Good Territory Open for Live Agents.

GINSENG
We want wild Ginseng for export to China and solicit your shipment in large or small quantities. Quick Cash Returns. We pay Express. Send for free price list.
H. A. SCHOENEN & SON
136 WEST 25th ST., NEW YORK CITY.
Reference: Greenwich Bank, N. Y. C.

Help Wanted

WANTED—
Single men to work in up-to-date cow barn. Must be good dry hand milkers. Wages $60 per month and board. Good opportunity for advancement. Can also use one or two experienced men at milking and feeding test cows, wages for this work depending on experience and ability.
WINTERTHUR FARMS
WINTHERTHUR, DEL.
350 head of registered Holsteins.

Office Help Wanted
A thoroughly experienced, reliable clerk for general office duties.
Assistant clerk capable of operating typewriter and tabulating machine.
First class stenographer experienced in keeping records, files, etc.
Telephone operator for private exchange, experience not necessary.
Location on large, fancy, private country estate adjoining city boundary. Good wages and working conditions. Cottages furnished married help.
Apply in own hand writing to Box 37, Barberton, Ohio.

WANTED MARRIED FARMER without children, to take charge of 75 acre general farm on shares or salary. Must be thoroughly experienced, wife to help with housework. Excellent accommodations. Good opportunity. Box 261, Hopewell, N. J.

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HAY Ship To The Old Reliable House
Daniel McCaffrey's Sons
623-625 Wabash Bldg. Pittsburgh, Pa.

AMONG NEW YORK FARMERS

(Continued from Page Two.)

up about the Cole Fraud. Men who have only grade cows are eager to know the details and there is hardly a man who has not heard of it. From my talk with breeders and farmers, I am pretty well satisfied now that they realize the folly of weekly tests. Surely this is a great blow to the weekly tests with innumerable ramifications and if it results in the adoption of the yearly test undoubtedly some good will come from this scandal.

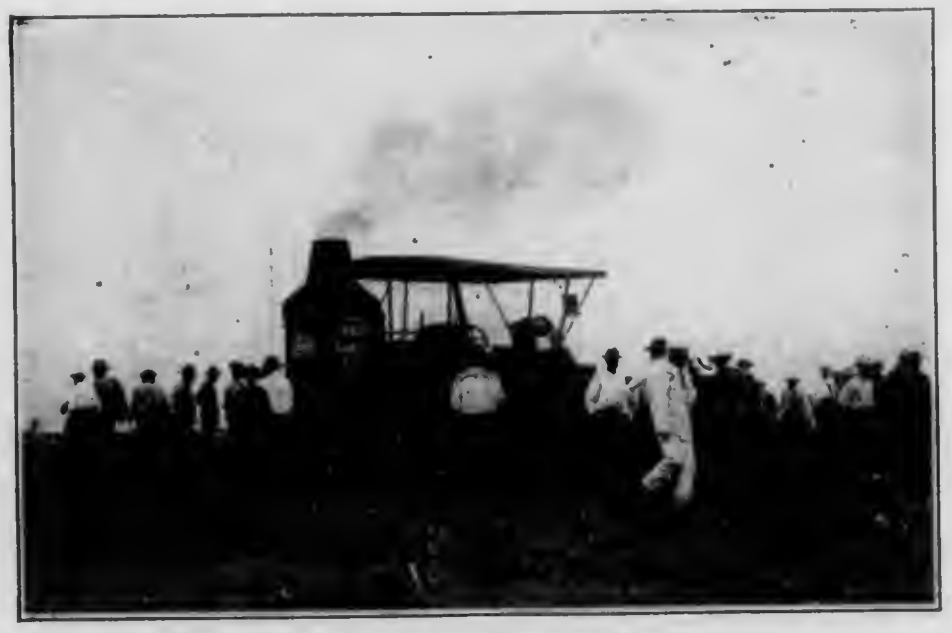
Fairs and Picnics

Fairs seem to be no different than they ever were. The midway and races are the main attraction and people seem to gather more for acquaintance sake and a day off than from any motive of eduoation. Surely the atmosphere of county fairs is not uplifting, and exhibits are rapidly dwindling in numbers. I personally should much prefer to see the farm and home exhibits reserved for winter shows which the farm bureaus are gradually developing. At such a show the atmosphere may be made entirely educational and farmers will come to learn, not practices alone, but such things as sources of seed. Such shows will develop a spirit of community swapping and trading, and if grain competitions are conducted in connection with them much valuable educational material may be gained at the same time.

It is my opinion that these winter meetings should be open to tradesmen of all classes, as a means of eliminating the undesirable, and that they should not be void of pleasure and of those things which tend to create a desire for the better things of life. There should be good music, good speakers, a rest room and library, equipped wth the necessary comforts of life, and good books and magazines. The children should be given prominence. Contests should be arranged for the boys and girls of the various clubs and they should be awarded with prizes which will broaden their vison and sphere of life. Money may be good, but the boy or girl may not be capable of using it to broaden his or her vision, or perhaps, he or she may not be permitted. A plow, a cultivator, a calf, a cockerel, or a sheep, each is good in itself for a boy; a dress, an apron, a handbag and the like, each is good in itself for a girl, but there is nothing new, nothing uplifting in these things tho they are valuable, and even tho animals are alive and active. Why not a trip to the Metropolitan Museum of Art, the Zoo, the good theatre, the good concert, or to the works of nature—Niagara Falls and the like, or even to a large manufacturing plant where there is action? These things will not necessarily lure the boy or girl from the farm. They will inspire, create ambition and enable the young man or young woman to bring them to the farm home.

Farmers picnics would seem to fulfill their purpose much more satisfactorily. Here people gather for comradeship, and the younger generation for games and recreation. Usually there is a band and good speaking. Sometimes the mistake is made of having technical addresses. That's just what people wish to get away from on such a day. They are interested in the bigger, broader affairs of the state, nation and the world and a good address on current topics pleases them and they go home feeling better about themselves, their county, their state, and their country and the part they play. Incidentally, I thought the speaker at a Warren County picnic left a good thought to carry home. He told his hearers of the destruction of property by the war, the influx of money and wealth into this country, the inflation of the dollar and how it would only buy one-half as much as it would ten years ago. He suggested that if they had any money to pay off the farm mortgage which was a debt incurred several years ago but which had not changed in value during the war. But he added that progress depended upon activity and any money over the mortgage cost not needed for working capital should be put into improvements. Surely we will get nowhere if we stand still.

My observatons indicate that improvements on property today are largely in the form of labor saving devices mainly for the home. There seems to be unusual interest in lighting systems, washing machines, milking machines, and devices which help out the situation caused by the leaving of the hired man. Tractors too are coming in for their share. I am told that 15,000 people attended a tractor demonstration at Holcombe, not far from Rochester some weeks ago. But, after all, these things are not going ahead as rapidly as they should. Many farmers seem to be waiting to take account of stock.



A Veteran of Ten Years and Many Acres

Roads

Farmers are all interested in the maintenance of roads altho it is only in winter when there are many exhortations about them. It is my opinion that summer practices are the cause of winter's ill-feelings. In New York the state and county roads are maintained very well. Of course, there is room for improvement but my observations show that the patrol system, if efficient, is an excellent means of maintenance. But many farmers are dependent upon the cross road—the mud road—and often the township secures the services of the farmer to care for this road. It seems to be the practice here in New York, and everywhere else I guess, to scrap the mud from the gutters and put it in the middle of the road to round it up or crown it up. A road must have good drainage and it should be higher in the center, but it is folly to put the mud from the gutters up on the middle. This mud in the gutters is filled with roots and organic matter and simply makes the center soft. It is like plowing down stubble for organic matter in a field, or growing a green manure crop. The center of the road should be left alone and the material from the sides and gutters scraped away or thrown out on the bank. In some places and along hard surface roads it is carted away. Along the mud road it should be carted away if there is no other way of getting rid of it.

Then too, farmers should interest themselves more in every state and national campaign for road building and improvement. Recently there has been entirely too much campaign for national highways, coast to coast highways, and not enough propaganda for home construction of good roads. The people of the cities are becoming more and more dependent upon roadways leading to and from the country immediately surrounding them, and less dependent upon the railways for the maintenance of their food supply. The ramification of the country with good stone and concrete roads is the important thing of today and it is a part of the farmer's duty to show and to teach the city people how true this is.—John H. Voorhees.

DURABILITY OF THE TRACTOR

One of the big questions in the minds of farmers concerning the efficiency of farm tractors is how long will they last. The accompanying illustration shows a tractor that started its work on a South Dakota farm in 1909. It has to its credit 1,750 acres of wild sod breaking—one of the hardest tasks a tractor can be put to—5,600 acres of stubble plowing, and 321 days of threshing. In the latter work it has been operating a 40x62 inch separator and has threshed 750,000 bushels. In addition, it has done many other miscellaneous jobs and much road work.

Old No. 1, as it has been named was borrowed for exhibition at the recent National Tractor Demonstration at Wichita. It plowed regularly at this demonstration, alongside of tractors that were not even dreamed of when this veteran took the field ten years ago, and it did its work easily, steadily, economically. This record of Old No. 1 is not a guarantee that all tractors can do likewise, but it is a partial answer to the question of how long a tractor may be expected to last. After the demonstration Old No. 1 went back to its work in South Dakota.

THE THREE GREATEST COLLEGES

I was talking the other night with my friend Jaffrey Dougles who has been making his home in the hill country ever since he became convinced that the driving, strenuous life of a big city newspaper editor was only getting him closer and closer to nervous prostration. Jaffrey has always held firmly to the idea that any man with tact can shame a community by suggestion. A suggestion is anything that arouses thought. He has therefore made it his business to do on a smaller scale what he did in a larger way when he was directing the editorial policies of a big daily.

"Of course I cannot reach hundreds of thousands every day," he said to me, " but I can drive down the road in my flivver and chuck several ideas into as many minds. Pete Samson, who lives at the foot of Breen's Hill, and whose front yard was an eyesore to the community with its manure pile, its broken machinery, its half-rotten boards and other truck, cleaned up the place because one afternoon I picked him up and took him over to Judge White's farm. I knew what a mess that Judge's place had been before he got hold of it, so I got him to talk about the changes he had made. That gave me a chance to intimate to Pete that he and I ought to get busy and see if we couldn't beat the Judge at landscape gardening.

"I'll tell you what I'll do, Pete,' I said. I'll help you with your place if you'll help me with mine. Let's show that law person that he isn't the only expert on a nice home in these parts.'

"Pete was a bit doubtful, I could see. But I rushed right along with my talk and when we got to his place I said 'This is a good time to start now that we are here together and in the right mood. I'll stop right here now if Mrs. Pete will invite me to supper, and you can come up to my place next Saturday.' With that we started in and made quite a change before the call came from the house for one of Mrs. Pete's meals. The next day someone at the store asked Pete what he had done to his yard, it looked sort of dressed up. And Jake Wilkins got Pete's pride stirred up by telling him he could not keep his yard clean.

"That's what started me on my mad career. I decided to advertise what I think are the three greatest colleges in the world—colleges every man and woman can attend, no batter where they live. These three are: Books, People, and Work.

"The world of books, magazines, papers, pamphelts, containing all the ideas we can ever use in any walk of life, are at our command, even when we have almost no money. If we want them, we can get them. The government sends free an astonishing amount of good stuff. Many great men have found a few books of greater worth to them than four years in college have been to thousands who did not value their opportunities.

"Then come the people we associate with. I find myself growing faster here than I did in the city because I take the ideas I pick up in my reading and pass them on to my neighbors, and actually see them take material form. When I take an idea to Frank Durand, Frank comes right back at me with an idea he has picked up somewhere. In this neighborhood we have started a sort of game. We are all hunting for ideas and passing them along to the rest of the folks when we meet at the store, church, or on the road as we pass the time of day.

"Third, work comes. The man who learns what he needs to know about his job, will become an educated man in ten years.—Thos. Dreier.

It is a pleasure to inform you that I heated my whole house with five tons of coal last winter. Formerly I used seven tons and over in two stoves and heated only three rooms. The Andes is fine.—R. D. HAPPEL, Cuddleback, N. Y., March 27, 1919.

GENTLEMEN: — F. Rosenkranz installed one of your Andes One Pipe Furnaces No. 210 in my house of six rooms and bath. It has done the work of two stoves and we are well pleased with it. Yours truly, FRANK FRALEIGH, Rhinebeck, N. Y.

GENTLEMEN: — Last Fall we installed your No. 240 One Pipe Furnace and have had no trouble in keeping nine rooms heated to 70 degrees or over all Winter on six tons of coal, which is less than it took to heat six rooms with stoves. — E. F. MOODY, Lebanon, N. H., April 11, 1919.

Saves Money in Churches, Stores, Homes

Not only in homes, but also in churches and stores the Andes is proving its worthiness to bear the name of "Andes". Everywhere, it cuts down fuel bills, lightens work, gives better heat-comfort and insures *healthful* heat.

Wherever it is used every one of its advantages are important, because they benefit your pocketbook and your health. Besides, the Andes requires less work to take care of than stoves.

ANDES SYSTEM
ONE PIPE FURNACE
"Better Heating for Less Money"

The Andes One Pipe will heat more rooms than a stove and do a better job all round for less money and less work. It ends the inconvenience of carrying coal or wood to room stoves and lugging dusty ashes away.

The Andes One Pipe *always* gives satisfaction. There are no exceptions to this rule. The reason is because we *guarantee* it to give satisfaction. If any Andes owner is dissatisfied, we guarantee that the furnace will be taken out and the full purchase price returned. Do you wonder, then, that we spent years perfecting it before we sold it? Do you wonder that we use *all new iron* and absolutely no "burnt out" brittle scrap?

Send for Free Book

Thousands of people are vitally interested in the Andes System One Pipe Furnace—people who are looking for comfortable heat, for healthful heat, for money-saving heat; people who are sick and tired of inefficient stoves. Thousands have already more than satisfied their every heating requirement with the Andes. The book tells the other thousands all about it. Get *your* copy now. Write for it today before it slips your mind. It's free.

PHILLIPS & CLARK STOVE CO., Inc.
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Manufacturers of the Famous
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GENTLEMEN:—Please send me your free, illustrated book, **Better Heating for Less Money.**

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ENTERTAINING THE CITY GUEST

Since living in the city the past two years I can better see some of the mistakes I made as a farm housekeeper when entertaining city guests. I am now in the peculiar position of seeing problems not only as a country girl, but also from the standpoint of a city person. Perhaps my experience will be of help to some other country housewife.

The joy of going visiting, traveling, or taking a trip any place is to have a change of life, food, scenery, experiences. To give the most pleasure to a city guest therefore, is to give her exactly the opposite from what she has been having at home—and that is the every-day farm experiences and food. It makes no difference what her condition of wealth or circumstances may be in the city, the change will be restful, helpful and refreshing—unless of course she happens to be one of those uncomfortable personages who cannot be adapted to anything new or different, and that kind can be readily punished by never receiving another invitation.

In entertaining, the tendency is always to treat our guests as we would wish to be treated, instead of giving them what they might most enjoy. Consequently there is a lot of unnecessary work and anxiety that need not be expended at all.

A farm housewife thinks the acme of happiness would be to sit on the porch and rest, but she is making a great mistake to insist that her guest sit there while she is busy in the kitchen. Remember that the office worker, while perhaps completely tired out mentally, will only delight in the routine of dusting, wiping dishes, shelling peas, husking corn, picking beans and dozens of other tasks that will assist, instead of hindering, her busy hostess.

Don't make the sad error of serving the foods that are universal in the city with the impression, that, because they are a novelty to the home family, they will also be a novelty to the guest. The effort will be entirely unappreciated. Save the delicious and convenient canned salmon, prepared meats, boxed crackers, lady fingers, gelatine, eclairs and ready-cooked foods for a treat for the family and yourself some time when they will be truly enjoyed. The convenience in preparation will help out on a busy harvest day to a marvelous extent, but do not waste them on city guests.

Give them instead, some of the every-day things from the farm with the fresh country flavor and home-made taste. Baked, stuffed, fried and creamed tomatoes; plain boiled corn, corn pudding, corn fritters, corn bread; plain mashed, baked or creamed potatoes (a good boiled potato is unknown in the city eating places, while the complicated "french fried" can be universally secured at even the "automats"; fresh peas, mashed turnips, cabbage, cottage cheese, creamed toasts are all suggestions for a country meal. Remember the family "made dishes" that are home favorites, even if they are not showy in appearance and are seldom thought of as a company dish.

Don't bother about cooking much meat. Meat may be expensive in the city, but it is the most conspicuous food and is usually the best eating at the restaurants. Serve plenty of fruits, cooked or raw and use them for desserts. Complicated pastries are unnecessary, and they take a lot of time and energy to make; but a good pie or ginger bread, or the old fashioned puddings, apple tapioca, dumplings, fruit and egg puddings will be greatly enjoyed. I have never seen junket at a restaurant and it is used in very few city homes.

I have had to take most of my meals in restaurants so I am rather familiar with their scope and limitations. There is a most deadening sameness in the bill of fares, and so many of the items taste the same. The beautiful ornamental cakes on exhibition, I believe, must all come out of the same batter. The pies all have the same general flavor. Ice cream is the universal dessert in the Philadelphia district so I would not go far out of my way to get ice cream for a city guest. All raw fruits are prohibitive in price except as a tidbit, and cooked fruits are almost unknown.—E. S. Brinton.

Vacuum Cleaner Operated by Home Electric Light Unit Makes Easy Work For Mother

CANNING CORN AND LIMA BEANS

If you have not already put up your winter supply of these goodies from the garden, do so at once, for they will help out on the cost of living this winter.

How to Manage the Corn

Don't try to can corn that is too old and tough; you will be likely to have trouble with its not keeping, for it seems to be harder to destroy the ferment spores on old corn than on the tender, juicy product. And corn should be canned just as soon after picking as possible. Boil it 5 minutes to set the milk, then dip into cold water for an instant, and at once proceed to cut it from the cob. Work fast; if possible one should cut it off while a second person packs it into the cans. Put in 1 level teaspoon salt and ½ teaspoon sugar per quart, and fill up the cans with boiling water. Do not pack the corn in too tightly, because it will be harder to get it to cooking in the middle of the can; too tight packing is no doubt one source of the inexplicable spoiling of canned corn which some housekeepers report every year. Adjust the rubbers and the covers loosely, set the cans on a rack in a boiler full of hot water, so that the water comes well above the tops of the cans; here again is doubtless another erstwhile source of spoilage, because it has been recently demonstrated that it takes considerable longer to get the contents of a packed can of corn to cooking all thru uniformly if the water comes only part way up the cans. Boil the canfuls of corn three hours in the covered water bath, then lift out, tighten covers, set cans on their heads until cool.

Canning the Limas

Gather them while they are very tender and juicy, and can right away if you want to get the choicest product. Sort according to size, blanch by boiling 5 to 8 minutes, using a cheesecloth square for holding them together in the boiling water so that they can be lifted out quicky and easily, then plunged into cold water. Pack at once into the cans, putting beans of similar size into cans by themselves; put in one level teaspoon salt per each quart, fill up the cans with boiling water, and lower at once into the hot water bath, and cook for three hours after the water gets to boiling vigorously about the cans. Then lift out, tighten covers, and set the cans on heads until cool to see whether any of them leak.

In case any leakage is discovered, you must put on another rubber ring, previously boiled in a soda solution (1 tablespoon per quart of water), and set the can in another water bath to cook for ½ hour.

The Matter of Can Rubbers

Make sure that you use good rubbers when canning corn, peas and lima beans, which are the most difficult to sterilize of all vegetables. A good rubber is one that has elasticity, ie., that will stretch well when you pull it, and that will not break when you double it over on itself and press the doubled ends together. A rubber that will not stand this test is likely to disintegrate in the long cooking that we have to give corn, peas, limas and succotash.

Canning Succotash

Proceed with the corn and limas just as if you were going to can them separately, then mix them and pack into the cans, allowing 1 teaspoon salt per quart can, and filling up with the boiling water, and cooking in the water bath for three hours, the same as for the corn or beans canned separately.

Steam Pressure Cooker Handy For Corn and Beans

Because a stem pressure cooker will shorten the cooking of canned corn, limas and succotash to forty-five minutes under 10 pounds steam at 240 degrees, it is a distinct advantage to have one. Also they shorten the cooking time for other products accordingly.

CANNED VEGETABLE SOUP

Scald, peel and mash one peck of ripe tomatoes. Run two good sized heads of cabbage, a dozen medium sized carrots, one bunch of parsley and one-half peck of onions thru the food chopper; mince three stocks of celery; boil one dozen ears on the cob, cut off and scrape.

Mix all together and add a small handful of salt for every gallon. If mixture seems dry, add water. Boil until the carrots are thoroly cooked. Seal, while hot, in quart jars.

In winter, add contents of jar to soup stock and a rich vegetable soup may be had at any time on short notice.

BLACKING THE STOVE

A woman, whose stove was always attractively polished was asked as to her method of attainment. "Just an every-day rub," she replied. "Let me show you my outfit."

It consisted of a small can of the evaporated milk style in which she had punched three or four holes with a small nail. In this she mixed her powder, the liquid slowly passing into a larger receptacle, from which poured it over the stove. A small handled brush distributed it and a large handled brush quickly added the polish. She always put on gloves for the operation, and blacking never touched her hands.

This led to a general discussion of this objectionable house task. One claimed that her secret was to wear an advertised stove-polishing mitten. Another said she always covered her gloved hands with paper bags and applied the blacking by means of a cloth, but admitted that the moisture often came thru. Another used a shaving brush, and still another said she always cold-creamed her hands and filled in under the tips of the nails with soap, thus making it easier to clean her hands after blacking the stove. However some converts adhered to the first plan, finding it one of the best solutions of the question.—Louise White Watson, Bucks Co., Pa.

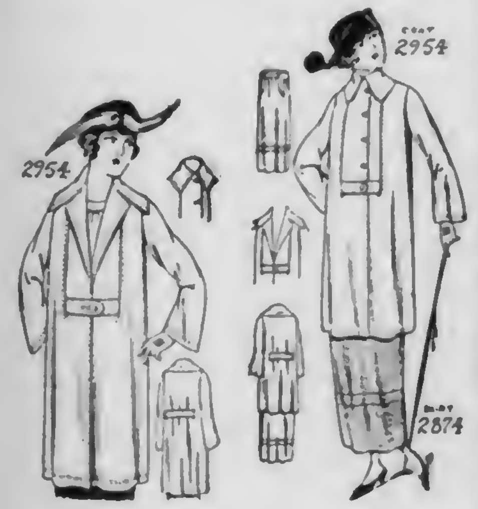
A VENTILATED STORM-DOOR

When covering the screen-doors last fall with roofing paper to form storm-doors, it was found there was not sufficient material to cover the full length of one of the doors. It was decided to use the remnant for the door that was porch-protected, allowing the exposure of the screen to come at the top. This proved to be one of the accidentals that now calls for a repetition, for when the room grew too warm or the fumes from the cooking needed a quick egress, the house-door was opened, and while one was being weather protected, also screened from passersby, the warm air quickly ascended and passed out into space.—Louise White Watson, Bucks Co., Pa.

PENNSYLVANIA FARMER PATTERNS

Give figures and letters of each pattern exactly as printed at beginning of each description or we will not be responsible for correct filling of orders. Give bust measure when ordering waist patterns, waist measure for skirt, and age for children's patterns. Address Pennsylvania Farmer, 261 S. Third Street, Philadelphia, Pa.

2954.—This style is attractive for cheviot, velour, jersey cloth, velvet, velveteen, corduroy, double faced cloaking, plush and other pile fabrics. The fronts may be rolled at high neck line, or open, as illustrated. The pattern is cut in seven sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. Size 38 requires 4 yards of 44-inch material. Price 10 cents.



Coat, 2954.—Skirt, 2874.—Shows coat pattern 2954 buttoned up to neck, instead of open as in previous cut; it is the same pattern. Skirt Pattern 2874. The coat and skirt would be fine in brown tricolette or broadcloth, or the skirt could be of silk, satin or velvet. The coat fronts may be open at the throat or rolled high at the neck edge. The skirt pattern comes in 7 sizes: 22, 24, 26, 28, 30, 32 and 34 inches waist measure. Size 24 requires 3 yards of 36-inch material. The width of the skirt at lower edge is about 1⅝ yard. This illustration calls for two separate patterns which will cost you 10 cents each.

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"When it is done, unlatching and lifting the lid stops the washer and starts the wringer, then I merely feed the clothes through and refill the tub.

"And while the second batch is washing, I can keep the wringer going too, and wring from rinse to blue and blue to basket.

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"And then it is all so interesting, and I feel so independent at being able to do it all myself."

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POTATOES ARE SCARCE

Potatoes will be scarcer in this state than they have been during the last two years according to John B. Shepard who has charge of estimating the crops of this state for the U. S. Bureau of Crop Estimates.

Until a few weeks ago it was expected that a bumper crop would be produced on Long Island and that this would largely offset the less promising conditions in other parts of the state. Recently, as a result of blight and heavy rains, potatoes on Long Island have rotted in a most unusual manner. Some one and three quarter millions of bushels or perhaps a third of the late crop of the Island has already been lost, and as the rot is still increasing there is no telling what the final yield will be.

In other parts of the state growers have been rather discouraged by the poor crops and low prices of the last two years and the acreage was quite sharply reduced this season. It is now estimated that only about 9,100 carloads will be loaded in this state this year, compared with 10,700 last year and 12,500 in 1917.

The total crop in this state will probably be about 32 million bushels whch is 10 percent below the ten-year average. The United States crop is estimated at 349 million bushels. This would be only 3½ bushels per person, about ½ bushel per person less than the average during recent years.

The short crop is the reason for the present high price. On the first of the month farmers were receiving an average of $2.27 per bushel, altho the wholesale price in heavy shipping sections was about 25 cents per bushel less. If this high price holds during the next few months it is probable that farmers will put fewer bushels than usual into their cellars, particularly as those who have stored potatoes over winter during the last two years have found them cheaper in the spring than they were in the fall.

A BIG TOBACCO CROP

The Maryland tobacco crop of 1918 is estimated at 35,000 hogheads. About 25,000 of this amount have already been shipped to Baltimore. As the warehouses are filled to the utmost a temporary embargo on further imports was made necessary. Tobacco prices are the highest ever paid and this crop is the largest the state has produced. The highest price is 47 cents a pound for this crop which is a great advance over 8 and 10 cents, the price of several years ago. France has bought 15,000 hogheads.—Marylander.

TRAPPING THE MUSKRAT

The pelt of the muskrat becomes prime and full-furred early in spring and it is then only that it should be taken. March is the best month for trapping this little pest.

Locate the mouth of their burrow and set a small trap in the entrance which is usually under water, staking the chain out in the stream so that the rat will drown when caught. When this is not done they often escape by twisting off their feet or toes. It is also well to use a number O trap as the larger sizes break the leg bone thus making it easy for them to escape.

Another good set is to find where they slide down into the water. Set a trap in the water at the foot of the slide and stake out in the stream.

Find where their feeding grounds are and set a trap among the floating grasses found there. Put an apple, carrot or parsnip on a stick and fix it in the ground so that the bait will be about a foot above the trap.

The pelts should be cased, that is, cut loose around the hind legs and pulled over the body. They should then be shaped on a thin board and dried. ?

Muskrats are sometimes used as food. Their flesh is red and firm resembling beefsteak. When properly prepared they have a delicious flavor. Care should be taken, however, that the two small glands found under the skin in the fore part of the body on the ventral side are removed, otherwise the meat will have a musky taste and will be unfit to use.—L. F. S.

APPLE CROP REPORT FOR SEPTEMBER

The commercial apple crop for the United States is now estimated at 23,072,000 barrels as compared to a production of 24,724,000 barrels in 1918, according to the September report, as issued by the Bureau of Crop Estimates thru its Fruit Crop Specialists. Improved conditions over the August report are noted in New York, especialy in the Hudson Valley Section. Western New York remaining practically the same. Virginia, West Virginia, and Pennsylvania show a slight increase over last month. A decrease in the Maine crop reduces the total prospects in New England from the August 1st condition.

Most of the Central States show a slight decline from the August report with the exception of Arkansas, which now promises one of the largest crops it has produced in recent years.

The condition of the Northwestern box apple crop continues good to excellent, with practically no change since the August report. The total commercial production of the box apple states promises to be 30,696,000 boxes, as compared to 21,309,000 boxes in 1918, or an increase of 44.1 percent in the box apple crop.

CORRECTING DAYLIGHT SAVING

A great deal of ink has been wasted in protests against the daylight saving law. Up here, we are back on old time, and it is a great relief, too. It seems like getting out of prison. A year ago we were getting up at three o'clock in the morning to hunt the cows with lantern light. What seems difficult to understand is why farmers continue to use the new time and get up in the early morning to work by lantern lght, when they might as well get together and form their own time. Call it the Dairymen's time, or what you will. Just leave the clocks alone, and then thru the Pennsylvania Farmer, or thru your other farm papers come to an agreement and use the normal time regardless of the national law on the matter. Have a time called League time, or Dairymen's time, or Farmers' time. The milk wagon cannot haul the milk until it is drawn from the cows and delivered. This remedy is easy to apply. I do not expect to find it difficult to stay in bed an hour longer the coming cold mornings, and we can use the time as it was intended to be used. If anyone likes to get up on the daylight schedule, let them. I'll be sleeping.—C. J. S., Steuben Co., N. Y.

PASSING EVENTS IN PICTURES

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(Photos, Copyright by Underwood & Underwood)

1.—Men and Women Bolshevists. Woman With Flag Fought in all Battles.

2.—British Warehouse at Kem Burned by Bolshevists; Loss, $1,000,000.

3.—The Historic Cardinal Mercier of Belgium, Now on Visit to United States.

4 and 5.—Conveying Food from Farm to City Housewives by Parcels Post.

6.—Panoramic View of Jerusalem and Mount of Olives.

7.—Marjorie F. Kinder, Aged 14. National Junior Champion Shot.

8.—Governor Sproul of Penna. in Conference With President Wilson.

9.—American Soldiers Leaving Russia With Russian Brides.

10.—A Government Fingerprint Expert.

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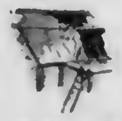

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POULTRY

Combining Fruit And Poultry

I have only three acres of good tillable soil, but it is almost ideal soil, a deep, rich clay loam, naturally drained. It is divided into four sections. One is a pear orchard, another a vineyard, another a plum orchard, partly in a block of blackberries and raspberries, and another a cherry orchard. All these are mosty inter-cropped with strawberries, that were grown as a cash crop when establishing the orchards and vineyard, and have been renewed after three or four years of fruiting.

Three of the sections are used for poultry yards every year, while the strawberries are being renewed in the fourth. All of the sections are fenced with woven wire netting for poultry. Hens can be so handled that they will not injure strawberry plants early in the summer before fruiting time. They will not eat strawberry leaves after they are a few inches high, and somewhat tough, if there is anything else green to eat. By having portable fences, to keep the hens on the weedy portions, hens can be utilized in keeping the strawberry plants clean of weeds, the droppings furnish plant food. During the fruiting time, the hens are confined, either in the buildings or small yards. Hens in the summer will do well in confinement if made to scratch for their feed, so I practice winter methods in summer. In this way, I am able to keep profitably, 1,000 hens on the three acres of fruit lands.

Last year I renewed the strawberries in the cherry orchard of 150 trees. The trees were four years old, and the strawberries grown by the hill and hedge row system, set when the trees were planted, had produced on the average profitable crops during the time. One year the sales were at the rate of $700 per acre. The varieties, Marshall, Wm. Belt and Brandywine, all large, highclass berriers, sold for from 12 to 15 cents per quart.

The fourth year, after picking in June, the land was at once set to cabbage, after a heavy dressing of hen manure. The cultivation of the cabbage put the land in good condition for setting to strawberries the following spring. The straw used for scratching litter is drawn out in the winter for mulching the strawberries, but only the manure on the floor goes with it, as that from the dropping boards would make the soil so rich there would be too much plant growth. The plan is to mix the manure on the dropping boards with acid phosphate frequently scattered over them, and use the manure for cabbage or starting new strawberry beds.

The cherry orchard mentioned has borne a small crop, as the trees are very large and thrifty. From now on they should bear good crops, and immediately follow strawberries when the latter are grown on the same land. For four years I should fruit both the strawberries and cherries, cutting down the width of the strawberry sections as the trees grow larger. Then the land will be given entirely to the cherries which should entirely occupy the ground. This is the way I establish permanent income bearing sections of my little farm in the village.

The year following the renewal of the strawberries in the cherry orchard, I will renew the strawberries in my vineyard of 500 vines, in the same way as described. I will put another piece of land in shape for bearing two crops a year for about four years. The grape vines, both five years old, should bear nearly full crops hereafter. The rows of grapes are nine feet apart, and I get in three rows of strawberries between them. The strawberries run under the grape vines, which are trained up quite high on the trellises, so the ground is about covered with them. The season here being not long enough to ripen all varieties of grapes, I grow mostly the Green Mountain, Moore's Early and Worden.

In a similar way, strawberries are grown in the plum and pear orchards, also with a new planting of apple trees. The one thing I have lacked with my plan, is a place for growing green feed for the poultry. The best I can do is to put a portable fence across a corner of one of the sections mentioned, to keep the hens off, while starting rape which I sow between the rows of the strawberries, sometimes June 1, taking care not to tread on the plants just starting, when picking the berries. The rape can be sown in each alternate row of strawberries, or even after the berries are picked. It makes a rapid growth in the rich soil, and as it keeps sprouting up after being picked off, makes green feed until the ground freezes. Without going into details, or itemized accounting and balances, it is enough to say that I get full average net returns from my fruit and poultry farm by practicing the intensive methods described. Having been a dairy farmer, I can say that my labor income is larger than on most farms with 25 cows.—W. H. Jenkins, Delaware Co., N. Y.

FACTS ABOUT EGGS

Eggs left in a draught, or where the wind will blow on them, dry down very quickly.

Washing eggs removes the natural covering of the pores of the shell, which allows the egg to evaporate and become stale.

Newly-laid eggs have a bloom, while old ones look smooth and slick.

Eggs mold when kept in a damp place, and the flavor deteriorates.

Exposed to the light, eggs quickly lose quality.

The odors of vegetables, meats, and other surroundings, will be as quickly absorbed by eggs as by warm milk.

The quality of eggs is dependent in a large measure upon the food the hens eat.

In eggs of high quality we have a yolk of a deep, yellow color, and a firm white, neither thin nor watery.

The germ of life is the germ of

decay. An infertile egg will decrease in quality with age, or thru improper handling, but cannot decay.

The freshest eggs are the heaviest, and will at once sink in water.

The average length of a hen's egg is 2.27 inches. The average diameter, at the broad end, is 1.72 inches. The average weight of an egg is one-eighth of a pound.

The spoiling of eggs is declared by scientific men to be due to the entrance of air, carrying germs of decomposition thru the shells. Normally, an egg-shell has a coating of mucilaginous matter, not perceptible to the touch, but quite sufficient to make the shell air-tight. This coating will keep out germs for quite a while, especially if the egg is carefully handled. But it is sure to become softened in time, either by washing or by friction in a case or with other eggs. Then the germ-laden air gets in and the egg begins to spoil.—Michael K. Boyer, New Jersey.

POULTRY HOUSE WINDOWS

A general rule in constructing poultry house windows is to furnish a square foot of glass to 16 feet of floor space. The part of the front covered with curtains should be twice the area of the glass or 1 square foot to 8 squares feet of floor space. The windows should be high enough to permit the sun to reach back nearly to the droppings boards and at some time during the day the sun should strike most of the floor. That is why we like the shed-roof type of poultry house. It gives the sun a chance to help in the cleaning of the litter. The birds like the sunshine and it helps to drive out dampness and to keep their winter range, which is the poultry house floor, in good condition.

If the windows have large panes it increases the loss when one is broken. If they are too small it increases the crevices where dirt can accumulate and the bars keep out much light. We have used hotbed sashes for windows in a very satisfactory manner. They were six by three feet and just fitted the windows in one of the poultry houses. The sashes were removed in the spring and then replaced late in the fall when some glass was needed on the house. During the summer the open-front of the house was protected by fine mesh wire. This would not generally be practical but in one case it did save a little expense for windows and furnished a place to store the hotbed sashes during the winter.

The curtains can be made of muslin or burlap pieced together from old sacks. Heavy canvas becomes clogged with dust and does not permit the air to enter and cheese cloth is so light that it is easily torn and too much cold air can come thru during severe winter storms when the wind is in the right direction. Some breeders have found that Leghorns will roost on the curtain frames and they like roll curtains the best. If the frames are used as a roosting place they are soon unclean and they may become infested with mites and lice. The curtains should be dusted every few weeks and taken down at intervals for a thoro beating or washing. The curtains are used to admit fresh air but no draughts and there is little chance for clean air to pass thru some of the dirty old poultry house curtains that we have seen.—R. G. K.

Put Your Trust in Service

MODERN efficiency recognizes no such thing as luck. It prepares for the worst. And simply enough, that is why the modern minded shooter chooses a Remington UMC gun and shells, dependable under all conditions.

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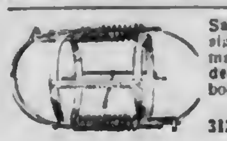

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KEZIAH COFFIN

By JOSEPH C. LINCOLN

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SYNOPSIS

Keziah Coffin, a good-natured widow, is packing up to leave the fishing village to go to Boston, her brother having died and left her alone. Grace Van Horne, ward of Eban Hammond and young friend of Keziah, is assisting her. They are discussing the coming of the new minister for the "Regular" Church, to which denomination Keziah belongs. Grace is a member of the "Come-Outers," a rival sect. Between the two a jealous rivalry exists. As the two women work "Kyan" Pepper, a widower comes in and proposes to Keziah, only to be ridiculed! Eben Hammond calls and induces Keziah to become housekeeper for the new and single minister. She accepts and Grace goes with her to prepare the house for his coming.

"Humph!" sniffed Keziah. "It might have been upstairs, but it didn't sound so. What did it sound like to you?"

"Like a footstep at first; and then like something falling—and rustling. Oh, what is the matter?"

Mrs. Coffin was glancing back down the hall with a strange expression on her face. Her grip upon the broom handle tightened.

"What is it?" pleaded the girl in an agonized whisper.

"Grace," was the low reply, "I've just remembered somethin'. That study door isn't stuck from the damp, because—well, because I remember now that it was open this mornin'."

Before her companion could fully grasp the import of this paralyzing fact, Keziah strode down the hall and seized the knob of the study door.

"Whoever you are in there," she commanded sterny, "open this door and come out this minute. Do you hear? I'm orderin' you to come out."

There was an instant of silence; then a voice from within made answer, a man's voice, and its tone indicated embarrassment.

"Madam," it said, "I—I am—I will be out in another minute. If you will just be patient——"

Grace interrupted with a smothered shriek. Keziah brandished the broom.

"Patient!" she repeated sharply. "Well, I like that! What do you mean by—Open that door! Grace, run out and get the—the constable."

This command was delivered entirely for effect. The office of constable in Trumet is, generally speaking, a pure honorary one. Its occupant had just departed for a week's cruise as mate of a mackerel schooner. However, the effect was instantaneous. From behind the door came sounds of hurry and commotion.

"Don't get the police on my account, please," said the voice. "If you will be patient until I get this—I'm just as anxious to come out as you can be to have me. Of all the ridiculous——"

"Come out then!" snapped Keziah. "Come out! If you're so everlastin' anxious, then come out. Patience! Of all the cheek! Why don't you come out now?"

The answer was brisk and to the point. Evidently, the unknown's stock of the virtue which he demanded of others was diminishing.

"Well, to be frank, since you insist," snapped the voice, "I'm not fully dressed."

This was a staggerer. For once Keziah did not have a reply ready. She looked at Grace and the latter at her. Then, without words, they retreated to the sitting room.

"Shall—shall I go for help?" whispered the girl. "Hadn't we better leave him here and—He doesn't sound like a tramp, does he. What do you suppose——"

"I hope you won't be alarmed," continued the voice, broken by panting pauses, as if the speaker was struggling into a garment. "I know this must seem strange. You see, I came on the coach as far as Bayport and then we lost a wheel in a rut. There was a—oh, dear! where is that—this is supremely idiotic!—I was saying there happened to be a man coming this way with a buggy and he offered to help me along. He was on his way to Wellmouth. So I left my trunk to come later and took my valise. It rained on the way and I was wet thru. I stopped at Captain Daniels's house and the girl said he had gone with his daughter to the next town, but that they were to stop here at the parsonage on their way. So—there! that's right, at last!—so I came, hoping to find them. The door was open and I came in. The captain and his daughter were not here, but, as I was pretty wet, I thought I would seize the opportunity to change my clothes. I had some dry—er—things in my valise and I—well, then you came, you see, and—I assure you I—well, it was the most embarrassing—I'm coming now."

The door opened. The two in the sitting room huddled close together. Keziah holding the broom like a battle-ax, ready for whatsoever might develop. From the dimness of the tightly shuttered study stepped the owner of the voice, a stranger, a young man, his hair rumpled, his tie disarranged, and the buttons of his waistcoat filling the wrong buttonholes. Despite this evidence of a hasty toilet in semidarkness, he was not unprepossessing. Incidentally, he was blushing furiously.

"I'm—I'm sure I beg your pardon, ladies," he stammered. "I scarcely know what to say to you. I——"

His eyes becoming accustomed to the light in the sitting room, he was now able to see his captors more clearly. He looked at Keziah, then at Miss Van Horne, and another wave of blushes passed from his collar up into the roots of his hair. Grace blushed, too, tho, as she perfecty well knew, there was no reason why she should.

Mrs. Coffin did not blush. This young fellow, altho evidently not a tramp or a burglar, had caused her some moments of distinct uneasiness, and she resented the fact.

"Well," she observed rather tartly, "I'm sorry you don't know what to say, but perhaps you might begin by telling us who you are and what you mean by makin' a—er—dressin' room of a house that don't belong to you, just because you happened to find the door unlocked. After that you might explain why you didn't speak up when we first come, instead of keepin' so mighty quiet. That looks kind of suspicious to me, I must say."

The stranger's answer was prompt now. It was evident he resented the suspicion.

"I didn't speak," he said, "because you took me by surprise and I wasn't, as I explained—er—presentable. Besides, I was afraid of frightening you. I assure you I hurried as fast as I could, quietly, and when you began to talk"—his expression changed and there was a twitch at the corner of his mouth—"I tried to hurry still faster, hoping you might not hear me and I could make my appearance—or my escape—sooner. As for entering the house—well, I considered it, in a way, my house; at least, I knew I should live in it for a time, and——"

"Live in it?" repeated Keziah. "Live in it? Why! mercy on us! you don't mean to say you're——"

She stopped to look at Grace. That young lady was looking at her with an expression which, as it expressed so very much, is beyond ordinary powers of description.

"My name is Ellery," said the stranger. "I am the minister—the new minister of the Regular society."

Then even Keziah blushed.

CHAPTER III.

In Which Keziah Assumes a Guardianship

Didama would have given her eyeteeth—and, for that matter, the entire upper set—to have been present in that parsonage sitting room when the Rev. John Ellery made his appearance. But the fates were against Didama that day and it was months afterwards before she, or any of what Captain Zeb Mayo called the "Trumet Daily Advertisers," picked up a hint concerning it. Keziah and Grace, acquainted with the possibilities of these volunteer news gatherers, were silent, and the Reverend John, being in some respects a discreet young man with a brand-new ministerial dignity to sustain, refrained from boasting of the sensation he had caused. He thought of it very often, usually at most inconvenient times, and when, by all the requirements of his high calling, his thought should have been busy with different and much less worldly matters.

"I declare!" said Mrs. Thankful Payne, after the new minister's first call at her residence, a week after his arrival at Trumet, "if Mr. Ellery ain't the most sympathetic man. I was readin' out loud to him the poem my cousin Huldy B.—her that married Hannibal Ellis over to Denboro—made up when my second husband was lost to sea, and I'd just go to the p'int in the ninth verse which it says:

'The cruel billows crash and roar,
And the frail craft is tempest-tossed,
But the bold mariner thinks not of life, but says,
"It is the fust schooner ever I lost.' "

And 'twas, too, and the last, poor thing! Well, I just got fur as this when I looked up and there was the minister lookin' out of the window and his face was just as red, and he kept scowlin' and bitin' his lips. I do believe he was all but sheddin' tears. Sympathy like that I appreciate."

As a matter of fact, Mr. Ellery had just seen Grace Van Horne pass that window. She had not seen him, but for the moment he was back in that disgusting study, making a frenzied toilet in the dusk and obliged to overhear remarks pointedly personal to himself.

Grace left the parsonage soon after the supposed tramp disclosed his identity. Her farewells were hurried and she firmly refused Mrs. Coffin's not too-insistent appeal to return to the house "up street" and have supper. She said she was glad to meet Mr. Ellery. The young minister affirmed his delight in meeting her. Then she disappeared in the misty twilight and John Ellery surreptitiously wiped his perspiring forehead with his cuff, having in his late desire for the primal necessities forgotten such a trifling incidental as a handkerchief.

"Well, Mr. Ellery," observed Keziah, turning to her guest, or employer, or incumbrance—at present she was more inclined to consider him the latter—"well, Mr. Ellery, this has been kind of unexpected for all hands, ain't it? If I'd known you was comin' today, I'd have done my best to have things ready, but Cap'n Elkanah said not before day after tomorrow and—but there, what's the use of talkin' that way? I didn't know I was goin' to keep house for you till this very forenoon. Mercy me, what a day this has been!"

The minister smiled rather one-sidedly.

"It's been something of a day for me," he admitted. "I am ahead of time and I've made a lot of trouble, I'm afraid. But yesterday afternoon I was ready and, to tell the truth, I was eager to come and see my new home and get at my work. So I started on the morning train. Then the stage broke down and I began to think I was stranded at Bayport. But this kind-hearted chap from Wellmouth—I believe that's where he lived—happened to pull up to watch us wrestling with the smashed wheel, and when he found I was in a hurry to get to Trumet, offered to give me a lift. His name was—was Bird. No, that wasn't it, but it was something like Bird, or some kind of a bird."

"Bird?" repeated Keziah thoughtfully. "There's no Birds that I know of in Wellmouth. Hum! Hey? 'Twa'n't Sparrow, was it?"

"That was it—Sparrow."

"Good land! Emulous Sparrow. Run consider'ble to whiskers and tongue, didn't he?"

"Why, yes; he did wear a beard. As for tongue—well, he was conversational, if that's what you mean."

"That's what I mean. If you rode twelve mile with Emulous, you must have had an earache for the last six. Did he ask a question or two about your personal affairs, here and there between times?"

Mr. Ellery laughed.

"Yes, one or two, between times," he admitted.

"I shan't die of surprise. Did you tell him who you was?"

"No-o, to be honest, I didn't. He was so very anxious to find out, that—well, I dodged. I think he believed I was going to visit Captain Daniels."

"Good enough! If I was governor of this state I wouldn't send any Thanksgivin' proclamations down this way. I'd just write Em Peters and Didama Rogers and a couple more like them and save myself the trouble. They'd have all I wanted to proclaim spread from one end of the county to the other in less'n a day, and a peck or two of extrys pitched in for good measure. I'm awful glad you didn't tell Emulous you was the minister. You see, Trumet's Trumet, and, considerin' everything, maybe it's just as well nobody knows about your bein' shut up in that study. Not but what 'twas all right, you know, but——"

"I understand. I'm not proud of it. Still, some one may have seen me come here."

"No, no, they didn't. This fog is as thick as Injun-meal puddin'. Nobody saw you."

"Well," with some hesitation, "the young lady who was here with you——"

"Oh, Grace Van Horne! She's all right. She won't tell. She ain't that kind."

"Van Horne? That doesn't sound very much like a New England name."

"'Tisn't. Her folks come from Jersey somewheres. But she was adopted by old Cap'n Hammond, who keeps the tavern down on the bay shore by the packet wharf, and she's lived in Trumet since she was six years old. Her father was Teunis Van Horne, and he was mate on Cap'n Eben's coastin' schooner and was drowned off Hatteras. Eben was saved just by the skin of his teeth and got a broken hip and religion while it happened. His hip's better except that he's some lame; but his religion's been more and more feverish ever since. He's one of the head Come-Outers, and built their chapel with his own money. You mustn't think I'm speakin' lightly of religion, nor of Cap'n Eben, either. He's a dear good soul as ever was, but he is the narrowest kind of Come-Outer. His creed is just about as wide as the chapel door, and that's as narrow as the way leadin' to salvation; it is the way, too, so the Come-Outers think."

"What are Come-Outers? Some new set?"

"Sakes alive! Haven't you heard of Come-Outers? Cat's foot! Well, you'll hear of 'em often enough from now on. They're folks who used to go to our church, the Regular, but left because the services was too worldly, with organs and choir singin', and the road to paradise too easy. No need for me to tell you any more. You'll learn."

Mr. Ellery was interested. He had been in Trumet but once before, on the occasion when he preached his trial sermon, and of that memorable visit remembered little except the sermon itself, the pews filled with captains and their families, and the awe-inspiring personality of Captain Elkanah Daniels, who had been his host. To a young man, the ink upon his diploma from the theological school till fresh, a trial sermon is a weighty matter, and the preaching of it weightier still. He had rehearsed it over and over in private, had delivered it almost thru clinched teeth, and had returned to his room in the Boston boarding house with the conviction that it was an utter failure. Captain Elkanah and the gracious Miss Annabel, his daughter, had been kind enough to express gratification, and their praise alone saved him from despair. Then, to his amazement, the call had come. Of casual conversation at the church and about the Daniels's table he could recall nothing. So there was another religious organization in town and that made up of seceders from his own church. He was surprised.

"Er—this Miss Van Horne?" he asked. "Is she a—Come-Outer?"

Mrs. Coffin nodded.

"Yes," she said. "She's one. Couldn't be anything else and live with her Uncle Eben, as she calls him."

The minister experienced a curious feeling of disappointment and chagrin. This young person, already predisposed to regard a clergyman of his denomination with disapproval, had seen him for the first time under most humiliating circumstances. And he should never have the opportunity to regain her favor, or his own self-respect, by his efforts in the pulpit. No matter how well he might preach she would never hear him.

"Has this Captain Hammond no children of his own?" he asked.

Keziah's answer was short for her.

"Yes," she said. "One."

"Ah! another daughter?"

"No, a son. Name's Nathaniel, and he's a sea captain. He's on his way from Surinam to New York now. They expect him to make port most any time, I believe. Now, Mr. Ellery, I s'pose we've got to arrange for your supper and stayin' overnight; and with this house the way 'tis and all, I don't see—"

But the minister was still interested in the Hammond household.

"This Nathaniel Hammond?" he asked. "You don't seem enthusiastic over him. Is he a black sheep?"

This reply also was short, but emphatic.

"No," said Keziah. "He's a fine man."

Then she resumed her semisoliloquy concerning her companion's entertainment.

"I guess," she said, "that the best thing for you to do will be to go to Cap'n Elkanah's. They'll be real glad to see you, I know, and you'll be in time for supper, for Elkanah and Annabel have been to Denboro and they'll be late home. They can keep you overnight, too, for it's a big house with lots of rooms. Then, after breakfast tomorrow you come right here. I'll have things somewhere near ship-shape by then, I guess, tho the cleanin'll have to be mainly a lick and a promise until I can really get at it. Your trunk'll be here on the coach, I s'pose, and that'll be thru early in the forenoon. Get on your hat and coat and I'll go with you to Elkanah's."

The young man demurred a little at thrusting himself upon the hospitality of the Daniels's home, but Keziah assured him that his unexpected coming would cause no trouble. So he entered the now dark study and came out wearing his coat and carrying his hat and valise in his hand.

"I'm sure I'm ever so much obliged to you," he said. "And, as we are going to be more or less together—or at least I guess as much from what you say—would you mind if I suggest a mutual introduction. I'm John Ellery; you know that already. And you——"

Keziah stopped short on her way to the door.

"Well, I declare!" she exclaimed. "If I ain't the very worst! Fact is, you dropped in so ahead of time and in such a irregular sort of way, that I never once thought of introducin' anybody; and I'm sure Grace didn't. I'm Keziah Coffin, and Cap'n Elkanah and I signed articles, so to speak, this mornin', and I'm goin' to keep house for you."

She explained the reason upsetting the former arrangement by which Lurania Phelps was to have had the position.

"So I'm to keep house for you," she concluded. Adding: "For a spell, anyhow."

"Why do you say that?" asked the minister.

"Well, you might not like me. You may probably be particular, you know."

"I think I can run that risk."

"Yes; well, you can't tell. Or I might not like you. You see, I'm pretty particular myself," she added with a laugh.

At the Daniels's door Keziah turned her new charge over to Matilda Snow, the hired girl. It was an indication of the family's social position that they kept "hired help." This was unusual in Trumet in those days, even among the well to do.

(Continued Next Week.)

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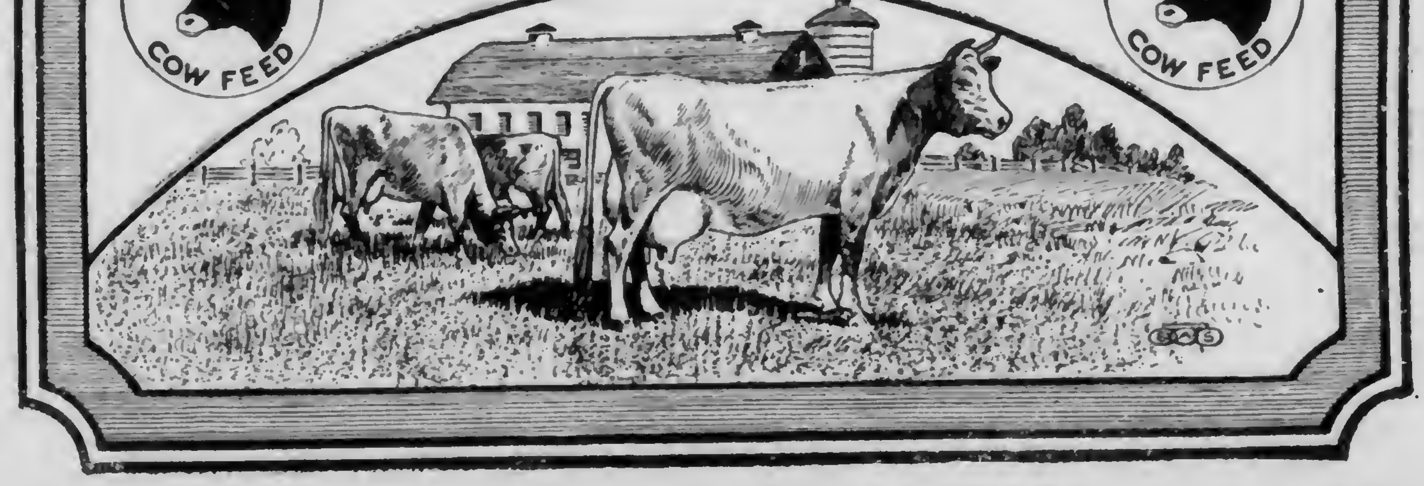

Markets

PHILADELPHIA PRODUCE

Philadelphia, Sept. 22, 1919.

The supplies of nearby New Jersey and Pennsylvania fruits and vegetables continues to decrease and this market is compelled to look more and more to distant points for supplies to meet the demand. Today there were 17 cars of apples, 13 cars of pears, 8 cars of grapes, 13 cars cantaloupes, 2 cars of peaches, 2 cars of plums, 3 cars sweet potatoes, 1 car cauliflower, 7 cars cucumbers, 15 cars lettuce, 7 cars onions, and 7 mixed cars from various outside points unloaded here. Among other supplies on hand were 17 cars potatoes in the Pennsylvania delivery yard and 54 cars potatoes and 8 cars cabbage in the Reading Railroad delivery yard. In addition to this there were about 60 cars of oranges, grapes, pears, plums, peaches and apples sold at the auction sales.

Vegetables

New Jersey and Pennsylvania continue to supply the great bulk of potatoes being used in this market and as supplies are heavier than they were a week ago, lower prices are prevailing. Giants in 150-lb. sacks are now bringing around $3.15@3.25 for No. 1's, with No. 2's mostly at $2.25 per sack. The cobblers or round stock are selling mostly at $4 per 150-lb. sack. The greater supply of potatoes are coming in bulk which are selling generally at $2.60@2.75 per cwt., while poorly graded and off grade lower potatoes hauled in by the nearby farmers are also lower the New Jersey stock selling generally at 90c@$1 per basket and the Pennsylvania which appear to be of a better quality at $1@1.15 per basket. No. 2 potatoes are unchanged from last week at 50@75c per basket. There is practically no change in the green bean market, except that the supplies are getting lighter and the quality generally poorer, range being the same from 50c@$1.25 per ⅝-basket, altho some extra fancy stock would probably bring higher prices. A very few beans are coming from the Eastern Shore and selling from $1.25@1.75 per hamper. Brussells sprouts continue scarce and when here sell around $10 per drum. Bunch beets continne in light supply and meet an accurate demand at 3@5c per bunch.

New York state cabbage is in light supply but prices are showing little or no change over last week, best selling around $50 per ton, and poorer as low as $40 per ton. Nearby cabbage however is firmer and higher selling from 60@90c per basket. Carrots have eased off since last week under a little more plentiful supplies and are selling at 65@75c per basket. There has been but very little cauliflower on the market prices on which are ruling firm at $3@3.50 per crate for fancy, and $1.50@2 for choice. The celery market is showing some advance over last week, New York State celery selling from 35@90c a bunch, and Kalamazoo, Michigan, selling from $2.50@3 per crate. Pennsylvania and New Jersey are supplying all the corn being offered here. The Pennsylvania selling from $2@3.50 per 100 ears, while the New Jersey corn which for the most part is poor and ordinary is selling from 50c@$1.25 per ⅝-basket. Cucumbers have been much more plentiful from New York state and prices have declined considerably, best selling at $1.50@.175 per bushel with large and choice at 75c@$1.25. The dills for pickling range from $1.75@2.25 per bushel and the count pickles from $2.50@4 as to size. Egg plants are scarce and higher best selling readily from 75c @$1 per ⅝ basket.

Horseradish in light supply and meeting a fair demand at $7@7.50 per barrel. Under the heavy offerings the lettuce market is lower, prices ranging mostly from 50c@$1 per box with some fancy at $1.25 and some very poor as low as 25c. The onion market is lower most sales of yellow onions ranging from $2.75@3.40 per sack. A car of California Australian browns are being sold slowly at $3.75@4 per sack, and a car of Ohio white onions in bushel crate sold at $2.35@2.40 per crate. As we predicted in these columns last week, prices on lima beans are much lower, supplies are quite liberal and sales are being made slowly at $1@1.40 per ⅝-basket and $1.50@2 per hamper. Strictly fancy small okra are scarce and bringing the fine price of $1.75@2 per ⅝-basket, but large okra are hard to sell at the low price of 30@50c per ⅝-basket. Green peppers continue about steady at 30@50c per ⅝-basket and there is little or no change in red peppers at 50@85c per basket. Radishes are lower and selling mostly at $1@1.50 per hamper. The market on Romaine is lower in sympathy with the lettuce market and prices are ranging from 50@85c per box. Squash is getting scarcer and market ruling firm mostly at 75c per basket. Tomatoes are showing a wide range in quality and condition, and prices are showing a corresponding range, the best selling at $1.50@2.25 per ⅝-basket, while the poorer grades are bringing from $1@1.25, and culls from 50@75c. There has been a sharp drop in the price on sweet potatoes which is in a great part due to the increase by the New Jersey sweet potatoes. The best Eastern Shores are now selling at $3.25 per barrel with lower grades at $2.75@3 and No. 2's and culls at $1.75@2.25 per barrel. The New Jersey sweet potatoes are selling from 85c@$1 per basket for the yellows and 90c@$1.15 for the reds, with No. 2's at 45@65c per basket. The offerings of the New Jersey spinach continue light but there is a wide range in price due to the wide range in condition. Good spinach is now selling at 50@75c per basket, with poor as low as 15@25c. Yellow Pennsylvania turnips are firm and active at 75@90c per basket, and the whites are selling at 50@65c per basket.

Fruits

Pennsylvania and New Jersey continue the supply of the market with a few apples but the greater bulk are coming from Virginia, Pennsylvania and New York States. Practically all of the 18 cars offered at the depot this morning, being from these three states except for two or three cars of for western box apples the bulk of the offerings of apples however are poor to fair in quality and on these grades the market is easy with some concessions being made in order to effect prompt sales. Strictly fancy apples, however, are scarce and this grade of fruit is bringing high prices. Sales are being made on about the following basis, viz: barrels, Maiden Blush, $4@8; Grimes Golden, $4@7.50; Twenty Ounce, $6@7; Wealthy, $5@8; Jonathans, $7.50@9; Baldwins, $4@6.50; Ganos, $5.50@7; Smokehouse, $5@7; Ortleys, $6.50@7; Kings, $6@8; Hubs, $5@7.50; Pippins, $5@6.50; Various odd Varieties, $3.50@7. Bushels: Wealthy, $1.75@2.25; Blush, $1.75@2.25. Other odd varieties, $1@2.50. Crabapples, $3@4 per bushel. Box apples: King Davids, $2.80@3; Gravenstein, $3@3.50.

Under the heavier offerings pears have declined from 25@50c per bushel, the prices being about as follows: Bartletts, $1.50@3.75 per bushel; Seckels, $2@2.25; Sheldons, $2@3.50; Anjous, $2@2.50; Clarigeaus, $2.25@2.75. Most of the peaches now coming are mountain fruit and these are selling around $3@3.25 per bushel and No. 2's at $1.75@2. Grapes are lower under heavier supplies, Concords selling from 18@22c per pony basket; Niagara, 20@23c, and the Delawares from 18@22c. Plums are showing generally poor condition and for that reason prices are lower. The Damson selling from 45@55c per 4 quart basket. Prunes at 30@35c, and the Green Gage mostly at 65c. Cantaloupes are lower under heavier supplies; standard crates selling at $2@3 per crate, and the flat crates from $1@1.25. The only berries on the market are a few raspberries which are selling around 12@14c per pint. Since our last report the first car of cranberries of the season has made its appearance and are now selling from $8@9 per barrel, and from $4.50@4.75 per half-barrel box.

Poultry

The live poultry market is ruling firm, altho prices are somewhat easier except on fancy, heavy live fowls which are selling at 30@38c per pound according to quality and condition. Chickens are equal to demand in supply at 28@36c per pound. Old roosters are steady to firm at 23@25c, and ducks are showing little or no change at 25@30c per pound.

Eggs

There has been practically no change in the egg market since our last report and prices have held firm on all grades with the advance last noted in these columns fully maintained on all strictly fancy eggs. The demand is sufficient to quickly absorb all offerings of strictly fancy eggs and there is no surplus whatever on the market. Prices are ruling about as follows: Nearby firsts, 54c; nearby current receipts, 52c; fair to good and undergrades, 44@48c; Western eggs are selling at 54c for extra firsts, with firsts at 50@52c.

LANCASTER PRODUCE

Lancaster, Pa., Sept. 22, 1919.

The Government's drive against the high cost of living has failed so far to hit the target in this county and produce market quotations today were as high as ever, with eggs higher. They were offered in small lots at 68 cents per dozen. Ham and bacon are still held at top-notch prices by county butchers despite the drop in wholesale prices.

Butter and Eggs.—Creamery butter, 60@62c per lb.; country butter, 65@70c per lb.; fresh eggs, 65@68c per doz; duck eggs, 50c per dozen; goose eggs, 10 cents each.

Poultry.—Dressed old chickens, $1.75@2 each; dressed young chickens, $1.25@1.60.

Vegetables.—Corn, 25@30c dozen; beets, 5c bunch; beans, 10@12c ½ peck; tomatoes, $1 basket; do., 6@8c box; lima beans, 50c quart; cauliflower, 10@15c head; cabbage, 5@10c head; sweet potatoes, 35c ½ peck; potatoes, $2 per bushel; do., 30c ½ peck; turnips, 15c ½ peck; spinach, 20c ½ peck; parsnips, 5c per box.

Fruits.—Apples, 20@40c ½ peck; peaches, 15c box; pears, 20@25c ½ pk.; watermelons, 35@85c each; cantaloupes, 5@8c each.

Grain Market.—Wheat, $2.20 per bu; rye, $1.65; oats, 85c; corn, $1.95; timothy hay, $30 per ton; mixed hay, $28; wheat straw, $10; oat straw, $5.

YORK PRODUCE MARKETS

York, Pa., Sept. 22, 1919.

There have been no changes in market conditions except in eggs, butter and potatoes. The two former have become so scarce that the demand has naturally advanced them rapidly. While in the case of potatoes, they had reached such a low level that our nearby truckers had just quit hauling them. This sent the market upward again and they are being quoted at $1.75 per bushel.

Eggs.—60@65c per dozen. Butter.—Country, 60@65c pound; separator, 65@70c lb.; milk, 10 cents quart.

Poultry.—Hens, 23@24c lb.; springers, 24@26c lb.; dressed, 90c@$2 each.

Vegetables.—Potatoes, 15@25c ½ peck; $1.75 per bushel; cabbage, 3@5c; lettuce, 3@4c head; beets, 5c bunch; radishes, 5c bunch; onions, 5c bunch; 20@24c ½ peck; lima beans, 20@25c quart; soup beans, 20@25c quart; celery, 5@10c stalk; egg plant, 3@8c each; beans, 10@15c ½ peck; tomatoes, 12@20c ½ peck; lard, 38@43c lb.; corn, 15@30c dozen.

Fruit.—Apples, 12@50c ½ peck; peaches, 25@40c ½ peck; $1.50@2 a basket; pears, 5@10c box.

Retail Grain Market.—Wheat, $2.40; corn, $2.25; oats, $1.01; rye, $1.65; bran, $2.50 cwt.; middlings, $3.50 cwt.

Wholesale Grain Market.—Wheat, $2.25; corn, $2.10; rye, $1.40; oats, 87c; bran, $48 per ton; middlings, $65 per ton.

BALTIMORE PRODUCE

Baltimore, Md., Sept. 22, 1919.

Produce.—Potatoes, $2.75@3 cwt. Cabbage, nearby, $4@6 per 100. New York, $50@55 ton. Lettuce, 75c@$1 basket. Onions, nearby, $3@3.50 cwt. Cucumbers, $1.75@2.25 bushel. Carrots, 1@3c bunch. Lima beans, 90c@$1 bushel. Beets, 3@4c bunch. Green corn, 15@25c dozen. Tomatoes, 60@75c basket. Squash, 40@50c bas.

Fruit.—Apples, Maryland and Virginia, fancy, $3@4. Pennsylvania, $6@8 barrel; Cantaloupes, 50@75c basket. Watermelons, $20@40 per 100. Pears, $2@2.25 bushel. Crabapples, $1@1.25 basket.

Butter.—Creamery, western fancy, 58@59c; choice, 55@56c; pound prints, 59@60c. Nearby rolls, 45@46. Dairy prints, 45@46c.

Eggs.—State, Pennsylvania and nearby, 52c; Eastern Shore and Virginia, 51c; Southern, 48@49c.

Live Poultry.—Springers, 37c lb.; old roosters, 21@22c; old hens, 37@38c lb.; ducks, young, 23@28c; do., poor, 23@24c; guinea fowls, 40@65c.

Grains.—Bag lots by sample, $1.95@2.30. Wheat, new, No. 1 red, $2.35¾; do., No. 3, $2.31¾; garlicky, $2.27¼; Corn, $1.65@1.75. Oats, standard, white, 75@75½c. Rye, nearby, $1@1.50.

Hay.—No. 1 timothy, $33@34 ton; do., standard, $32@33 ton; light clover, mixed, $30@30.50 ton. Clover, mixed, $28@29. Tangled rye straw, $14.50. Wheat straw, $12@13 ton. Oat straw, $12@14 ton.

NEW YORK PRODUCE

New York City, September 22, 1919.

Butter.—Firm; receipts, 6,235 tubs; creamery, higher than extras, 59½@60c; creamery, extras, 92 score, 59c; firsts, 52@58c; packing stock, current make, No. 2, 44c.

Eggs.—Firm; receipts, 9,536 cases; fresh gathered extras, 57@58c; extra firsts, 54@56c; firsts, 49@53c; state, Pennsylvania and nearby Western hennery whites, fine to fancy, 78@80c; state, Pennsylvania and nearby hennery whites, ordinary to prime, 62@77c; state, Pennsylvania and nearby hennery browns, 66@70c; gathered browns and mixed colors, 57@60c.

Cheese.—Irregular; receipts, 2,968 boxes; state, whole milk, flats, current make, specials, 30½@31c; average run, 29½@30c; state, whole milk, twins, current make, specials, 30@30½c; average run, 29½@29¾c.

Poultry.—Live, steady; chickens, 33c; fowls, 32@33c; old roosters, 19c; turkeys, 25@30c. Dressed poultry steady; fowls, 25@39c; old roosters, 21@22c; western chickens, 27@45c.

Vegetables.—Potatoes, Long Island, $5@5.50 per 165-lb. bag; Jersey No. 1, $3@4.50 bag; No. 2, $2. Beans, green, $1@2 basket; do., lima, $1@2.25 basket. Beets, $2@2.50 per barrel. Carrots, $1.50@2.25 per bbl. Cabbage, $4@7 per 100. Lettuce, 25c@$1 basket. Tomatoes, No. 1, $1@2 box.

Fruit.—Apples, Alexander, $4@7 bbl.; Maiden Blush, $3@9; McIntosh, $4@9; Wealthy, $5@7.50. Peaches, $2@3.50 crate; Jersey, $2@3 bushel.

PHILADELPHIA LIVE STOCK

Philadelphia, Sept. 22, 1919.

Receipts of live stock for week ending September 20 were as follows:

	Beef Cattle	Sheep and Lambs	Hogs
Total for Week	2,186	9.337	6.287
Previous Week	2,818	5,978	5,969

Calves.—Receipts of calves last week were 1,135 head against 1,653 head week previous.

Beef Cattle.—Supplies were moderate but ample for trade requirements and the market was quiet and barely steady. Steers, good to choice, $14@15.50; do., fair to good, $12@14; common to fair, $10.50@12; cows, fat, per lb., good to choice, cornfed, 8@10c; fair to good, 7@8c; do., common to fair, 5@7c; calves, extra choice, $23@23.50; fair to good, $18.50@21.50; common, $12.50@16.50; heavy, $8.50@12.50; Tennessee, choice, $17.50@18.50; other southern, $9@13.

Sheep and Lambs.—The market ruled weak and lower, due to easier outside advices, more liberal offerings and a light demand. Sheared sheep, wethers, extra, $10.50@11; good to choice, $9@10; medium, $7@8; common, $3.50@5; ewes, fat, heavy, $7.50@8; spring lambs, choice, $14.50@15; medium, $13@14; culls and common, $9.50@11.50.

Hogs.—Demand was fair and values generally were firmly maintained under moderate supplies. Quotations for best western, $20@20.50; nearby, good, $18.

City Dressed Stock.—There was little activity in this market and prices favored buyers thruout the list. Sheep and lambs were dull and lower. Quotations: Steers, 16@23c; heifers, 14@20c; cows, 10@16c; calves, city dressed, choice, 29@31c; country dressed, 25@28c; sheep, 16@22c; lambs, springt 24@28c; hogs, 27c.

LIVESTOCK

Chicago, Ill., Sept. 20.—Hogs.—Receipts, 2,000; mostly steady with yesterday's average; heavy, $16.50@18; medium, $16.75@18.25; light, $17.25@18.25; light lights, $16@17.75; heavy packing sows, smooth, $16@16.50; packing sows, rough, $15.25@15.75; pigs, $15@16.50.

Cattle.—Receipts, 600; compared with week ago, beef steers, stockers and feeders, steady to 25c lower; she stock, steady to 25c higher; bulls, 50c to 75c lower; calves, 50c to $1 higher.

Sheep.—Receipts, 2,500; compared with week ago, killing grades, irregularly, $1 to $2 lower; choice western lambs, declining least; breeding and feeding sheep and lambs, $1.50@2.50.

Pittsburgh, Pa., Sept. 20.—Cattle.—Steady; supply light; prime, $16@16.50.

Sheep.—Steady; supply light; prime wethers, $10.50@11; culls and common, $3@5; lambs, steady. Veal calves, $22@22.50.

Hogs.—Steady; supply, 5 double decks; prime heavies, $18@18.25; medium and heavy yorkers, $18.75@19; light yorkers, $17.50@18; pigs, $17@17.50; roughs, $14@15.50.

PHILADELPHIA HAY AND GRAIN

Philadelphia, Sept. 22, 1919.

Baled Hay and Straw.—Receipts, 72 tons hay and no straw. Offerings of hay were moderate, and the market was quiet and without important change. Straw was steadily held. Timothy hay, No. 1, $33; No. 2, $29@30; No. 3, $26@27; clover-mixed hay, light mixed, $29@30; No. 1 mixed, $28@29. Straw.—No. 1 straight rye, $13.50@14; No. 2 do., $12.50@13; No. 1 tangled rye straw, $13; No. 2 do., $12.50@13; No. 1 wheat straw, $12.50@13; No. 2 do., $11.50@12; No. 1 oat straw, $12.50@13; No. 2 do., $11.50@12.

Bran.—Firmly held. We quote; car lots, to arrive, including sacks, western soft winter bran in 100-lb. sacks, per ton, $46@47; spring bran, in 100-lb. sacks ton, $44@45.

Corn.—Yellow, to arrive, $1.65@1.70.

Oats.—No. 2 white, 77½@78½c; No. 3, 76½@77½c.

NEW YORK HAY AND GRAIN

New York City, September 22, 1919.

Feed.—A very heavy tone prevailed in the feed market and prices were easy at the recent decline. Offers were liberal, especially for bran, which was apparently not wanted by buyers.

Quotations: City feed, bran, $45; middlings, $58 in 100-pound sacks; red dog, $69, nominal, in 100-pound sacks:; Western spring bran, $42.50@43; standard middlings, $50@58.50; flour middlings, $65@63.50; red dog, $71, all in 100-pound sacks, 30 day shipment. Oat feed, $31; rye middlings, $52; white hominy feed, nominal, all in 100-pound sacks. Cottonseed oil meal, October shipment, $75.50; linseed oil meal, nominal, in 100-pound sacks.

Hay and Straw.—Market is steady at 63d Street shed and without change. In Brooklyn supplies continue excessive and market dull and weak, with sales very rare above our inside quotations except on top quality timothy hay in big bales. Effective midnight September 19, the New York Central removed embargo from all Manhattan points. There is a river barge due on Monday holding about 20 cars of hay and straw.

Hay.—No. 1 large bales, $35 ton No. 2, $30@33 ton; No. 3, $27@30; shipping $25@27 ton. Fancy light clover mixed, $31@32 ton. Clover, No. 1, mixed, $28@30.

Straw.—Per ton, No. 1 rye, $16; No. 1 oat, $14@15.

Wheat.—No. 2 red, $2.37½; No. 2 hard winter, $2.37½.

Corn.—No. 2 yellow, $1.64¼; No. 3 yellow, $1.64¾.

Oats.—No. 2 white, 78@78½c; No. 3 white, 77c.

Rye.—Export, $1.56.

PITTSBURGH HAY AND GRAIN

Pittsburgh, Pa., Sept. 22, 1919.

Receipts of hay are very meager considering the demand. This is especially true of mixed and clover hay. There is no difficulty in placing all arrivals at the present market prices. Would advise shipments.

No. 1 timothy, $31@31.50; No. 2, $28.50@29; No. 3, $25@27; No. 1 light mixed, $29.50@30; No. 1 clover mixed, $31.50@32; New No. 2 clover mixed, $26@28.

Straw.—Receipts of straw, with the possible exception of oat are in excess of demand. Market not very enthusiastic.

No. 1 oat, $11.50@12; No. 2, $11@11.50; No. 1 wheat, $11@11.50; No. 2, $10.50@11; No. 1 rye, $11.50@12; No. 2, $11@11.50.

Ear Corn.—Arrivals, tho scarce, are difficult to place. Buyers loathe to take receipts at the present high prices. Yellow No. 2, $1.80@1.85.

Oats.—Receipts in excess of demand. Market draggy. Prices looking lower. No. 1 white, 75¼@75¾c; No. 2, 74¾@75c; No. 3 white, 73½@74c.

PHILADELPHIA DAIRY MARKET

Philadelphia, Sept. 22, 1919.

Butter.—Receipts, 2670 tubs. There was little trading in a wholesale way as the produce exchange was closed and business on the street was of small proportion. Prices were without important change. The quotations were: Fresh, solid-packed creamery, fancy, high-scoring goods, 60½@62½c, the latter for jobbing sales extras, 59½c; extra firsts, 58½c; firsts, 53@57c; seconds, 50@52c; thirds, 48@49c; sweet creamery, choice and fancy, 61½@63½c; do., fair to good, 56½@60½c; ladle-packed, as to quality, 47@49c; packing stock, 44@46c; fancy brands of nearby prints jobbing at 64@66c; good to choice, 59@63c; fair, 54@57c.

Cheese.—The market was quiet and unchanged, with moderate but ample offerings. New York, whole milk, flats, fancy, 31¾@32c; fair to good, 30½@31½c; Wisconsin, whole milk, flats, fancy, 32¼c; fair to good, 30@31c; jobbing sales of fancy goods, 32¼@33c.

NEW YORK MILK MARKET

New York City, September 22, 1919.

Business was rather slow last week and some of the larger distributers were manufacturing on a small scale to use up the surplus. September rate for 3 percent milk in 200 mile zone is $3.20 per 100 lbs. to the shipper; 1 cent added which goes to the Dairymen's League brings the total price paid to $3.21; add 4 cents per 100-lbs. for each one-tenth of one percent extra butter-fat.

Receipts of milk and cream in 40-quart cans for the week ending September 20, 1919, were as follows:

Railroad	Milk	Cream
Erie	40,594	3,575
Susquehanna	5,890	89
West Shore	15,716	1,940
Lackawanna	59,843	2,909
N. Y. Central (long haul)	160,802	3,729
Ontario	48,110	2,003
Lehigh Valley	47,240	868
New Haven	6,734	68
Pennsylvania	12,119	460
Other Sources	6,200	250
Total	403,248	15,891
Same week last year	372,669	16,041

TOBACCO MARKET

With frost due and many acres of tobacco yet in the field it is as usual a question whether to take chances for the evident advantage of leaving immature tobacco out to develop or to cut same and thus be safe. Advice is dangerous but in a series of years the former course has been the better. It is seldom that early frost is fatal to the growing plants and in most instances the damage is so slight as to be scarcely noticeable. However, fully three-fourths of the crop is now cut and safely housed and most of this was fairly well matured. A fair quality and but an average yield per acre is indicated but the short acreage will bring the total product to much less than usual. We have reports of occasioned crops which have apparently given maximum results; one field of seven acres the greater part of which has some leaves measuring 40x22 inches. No sales were reported during the week, all concerned preferring to await a time when values can be more equitably established. Those with holdings of the 1918 crop have had repeated opportunities to sell at a profit but as compared with prices before packing, but they prefer to hold until tobacco is in condition for sampling and more is known as to prices of the new product. The other cigar leaf localities report harvesting under way unimpeded by climatic conditions. Slight frost in some places did no considerable damage but was, of course, the cause of somewhat unwarranted hustling to get the crop under cover. There was no abatement in the dry weather prevailing in some places.

COUNTY NOTES

Cumberland Co., N. J., (S), Aug. 25.—Weather hot and showery. Alfalfa king sown. Corn blown down badly. Blossoms off beans and tomatoes. Watermelons and cantaloupes ripe. Much fruit wasted by wind. Tomatoes, 60 cents a basket. Cider sells for 35 cents a gallon at press. County fair August 27 and 28. Good season for huckleberries.—C. J. S.

Cumberland Co., N. J., (S) Sept. 12.—Weather warm with showers. Clear and cool on the 12th. Tomatoes various prices up to $1.50 a basket. Watermelons, 40 cents, more or less. Lima beans, 25 cents a qt. Peaches $1.50 and $2 for Iron Mountain. Too wet for work part of the time. No big crops to gather due to an excessibly wet season.—C. J. S.

Union Co., Pa., (C) Aug. 28.—The Steininger farm of 124 acres in White Deer township was sold for $3,600 to close an estate. There is a good brick house and a bank barn, and some timber on the farm. J. A. Grove sold his farm of 55 acres near Lewisburg, for $13,000. W. R. Fetzer's farm of 60 acres east of Lewisburg sold for $8,000. Farms are more in demand now and at better prices than they have been for many years, and the 17 packer farms will be sold in September to close James C. Packer's estate. Wheat seeding will begin the first week in September, atho there are many acres of stubbles yet to be planted for wheat. More acres of buckwheat are seen in this section than in recent years, and it promises to be a fair crop. Potatoes are not yielding well generally altho T. E. Landis grew 220 bushels of potatoes on one acre of H. A. Cook's farm in Limestone township. Many fresh cows and springers are changing hands weekly at the Brown's stock yards at prices on an average above $100. Most of the public schools wil open on September 2nd for a seven month's term in the country. Carloads of feeds for dairy cows are being bought by milk producers now. Hired help is scarce on farms, and many farm boys left their places in public works for higher wages than farmers feel able to pay.—J. N. Glover.

Broome Co., N. Y., Sept. 9.—The last few days have been very hot and dry Oats are all harvested and a good crop, except where damaged by the grasshoppers, they did not arrive till about the time to cut oats, so some fields escaped entirely while others were hardly worth cutting. Potatoes are a fair crop and are selling at $1.25@1.30 per bushel. Sweet corn is plentiful and brings from 75c to $1 per 100 ears. The potato bugs have not given much trouble this year. Apples are a small crop, around here and there is a great demand for them. Grapes are abundant and very nice. Some threshing is being done, and silo filling is going on, the silo corn is very large and nice. Hay is the highest ever known good loose hay selling quickly at $36 per ton and some even higher. A poor grade of baled hay sells at $40.50 per ton. All kinds of grain and feed are staying up in price. Some salvage wheat is being sold in this section at nearly $4 a hundred pounds.—C. H.

PLEA FOR THE ELDERBERRY

In your issue of August 9 a farmer asks how to kill and remove elderberry bushes. We are more interested in knowing how to cultivate these bushes and make them more prolific. The berries are prized here for their medicinal and food value. Rightly used they are good for throat affections and as a mild cathartic. They are excellent when canned for sauce. They also make delicious pies if a little vinegar is added to add tartness. The bushes also make a nice hedge. In June when they are in blossom their delicate white flowers are a joy, and in September the berries ripen and they are again a thing of beauty.

Each year the ordinary small fruits are getting more scarce and it stands us in hand to save even the elderberries which are hardy and never failing. The berries make good wine if we desire it. For all of these reasons we protest against the destruction of the bushes. It is highly commendable for farmers to want to clean up the farms, but we believe that it will pay them to prune up the elder bushes and utilize the fruits.—L. E. G., Tioga Co., Pa.

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For Sale: Farm 89 acres, 2 mi. from town, 1 mi. from shipping point; 75 acres clear, rest in large timber; in high state cultivation. Suitable for dairying, trucking, well adapted to irrigation. Has nice stream, within quarter-mile of trout lake. Fine, healthy, location; good road.
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That was the only difference between those two fields. One produced a matured crop running just over 80 bushels to the acre, the other averaged barely 30 bushels of soft corn. If both crops sold at the same bushel price, the fertilized field produced $2,000 more than the unfertilized one.

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The fast growing bacon hog. Pigs any age, bred gilts, free circular. LOCUST LAWN FARM, Bird-in-Hand, Box 2, Lanc. Co., Pa.

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Large Berkshire Swine Registered High Grade. Prices reasonable. Write
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Chester White Hogs, All Ages
Shorthorn Bulls. R. L. MUNCE, Canonsburg, Pa.

IMPORTANCE OF GOOD HORSE STABLE

The farmer who always has good horses, and keeps them in good working shape, has good stables for them. In fact, if you look into a man's stable you can judge very nearly as to what kind of horse he has without even seeing the animals. Its a common thing for some farmers to have to purchase a new horse or team about every year for necessary farm work. "Bad Luck" is the reason of this, so they say; but the real fact of the case is that carelessness and neglect is more the cause than anything else. It is not necessary to have a parlor for a horse stall, yet it can easily and cheaply be made comfortable and convenient as well as safe. Many good horses are annually crippled and perhaps killed in their stalls because of lack of good sense on the part of the owner. If a stall is built so that the horse can get its head or legs under the partition or other movable parts of the stable, the animal is almost sure to become injured. The horse stall should be light around the base, and the floor smooth and firm. A solid raised dry earth floor I have found to be about as good as any. The horse is an active animal and for this reason the stall should be roomy enough at the sides and rear both for the comfort of the horse, and the convenience of the caretaker in grooming and harnessing. A good manger of medium height and depth, with a good grain box at the side is one of the principle stable fixturss. A good horseman will provide his horses with a clean, comfortable stable and plenty of dry bedding at all times of the year when they occupy the stables. A horse that works hard all day is tired at night and whether it lies or stands during the night resting period, a deep bedding of dry clean straw will enable it to rest better and more natural, hence he in better condition for the following day's work.—C., N. Y.

1500-Pound Aberdeen-Angus Bull

GENERAL PERSHING'S HORSE

"Kidron," the horse that General Pershing rode to victory in the world war, began his career as a laurel wreath collector by getting in quarantine. While the great commander is playing the leading role in triumphal parades in the big cities of the country, his war horse is detained, under observation by Government veterinarians, at Newport News.

It is not that "Kidron," so far as anybody knows, has any "catching disease," but simply that he may have any equine disease, and like every other horse of the A. E. F., must stay at the port of entry, for five months, until the Government veterinarians know that he is a safe animal to be at large in horse society in the United States.

Naturally, there are a great many people who wanted to see General Pershing mounted on the horse that carried him over the battlefields of Europe during the last fateful days of the world's greatest war. That desire was felt by the public, not only, but by the army. A great captain and his horse was almost inseparable in the memory of the soldier. When a G. A. R. veteran tells about the great parade in Washington in 1865, he is sure to talk of "Grant mounted on Cincinnati." The Confederate veteran loves to dwell on how General Lee rode "Traveler" out among the men when he told them goodbye after the surrender at Appomattox.

But there are many millions of horses and horse owners in the United States who, respectfully as they feel toward "Kidron," are entitled to protection from any disease that he may have picked up in Europe, where there are many horse diseases of which the United States has, thus far, kept clear. When the appeal was made, without the knowledge of General Pershing, to the United States Department of Agriculture that an exception be made of "Kidron" and that he be allowed to come out of quarantine almost immediately after landing, in order that he might be in Washington for the parade on September 17, a regretful but firm refusal was the result. "Kidron" will remain in quarantine at Newport News for 140 days.

HOG RATIONS

Corn alone will not make profitable gains on hogs except during the last month or six weeks of the feeding period when the hogs have been fed previously on balanced rations. This fact is now recognized by all hog feeders, and we seldom see an all-corn-fed hog in this day. But there is no complete agreement among hog feeders as to what is the best balancer for corn. The writer thinks that tankage is when it can be bought on a fair price basis with other feeds. But of all balancers wheat shorts are the most palatable to hogs, and for that reason we prefer to feed some shorts even when tankage is fed. Shorts give greater bulk to the ration and the mixture can be fed with the result that each hog is more likely to get his share.—L. F. S.

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a big knee like this, but your horse may have a bunch or bruise on his ankle, hock, stifle, knee or throat.
ABSORBINE
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King Korndyke Sadie Vale Jr., No. 20221, two nearest dams averaging 36 pounds of butter in 7 days, heads my herd. Butter records from 17 pounds two-year-olds to 34 pounds at full age. Also high grade Holstein calves, either sex, $20.00 each. Write your wants. PAUL H. STEVENS, Prop.

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Two are coming two years old, one three years. Better see these bulls; see the size and milking ability of dams and the remarkable calves the older one is getting. They have been raised under ideal conditions and are priced right. PLUMLYN FARM, Fairview Village (near Norristown), Pa.

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Ayrshire Bull Calves From high record A. R. Dams
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Veterinary

Conducted by W. C. Fair, V. S.

Advice thru this department is free to our subscribers. Each communication should state history and symptoms of the case in full; also the name and address of writer. Initials only will be published. We cannot make reply by mail. This is one of the most valuable columns of the paper and we invite readers to make use of it. Clippings from this column, when properly preserved and classified, make one of the most valuable medical symposiums a farmer-stockman can obtain.

Indigestion.—We have 4-year old cow that has eaten too much food. Giving her Epsom salts relieved her, now she is doing fairly well, but gives only ½ of her regular milk yield. Can you tell me what to put in her feed that will cause her to give more milk? H. A., New London, Pa.—If you have another pasture lot turn her out in it. A change of grass will very often help such a cow. If you feed her some grain twice a day, give her a tablespoonful powdered gentian and the same quantity of baking soda in it each time she is fed.

Sow Caught Cold.—Nasal Catarrh.—Have a sow that lost her appetite for food several days ago, since then she has mucus discharge from both nostrils. Altho she has eaten very little for a week she seems to be strong. Will she infect other hogs? A. J., Glenshaw, Pa.—Give her twenty drops tincture gentian, 30 drops tincture of cinchona, and ten drops tincture nux vomica at dose in ½ pt. cold water as a drench three times a day. Her ailment is not infectious.

Chronic Cough.—Since last winter one of my cows has been troubled with a cough. On February 19th, our bull served her. Some ten days later she gave birth to fetus about one-half grown. Since then she comes in heat regularly, been served several times, but fails to get with calf. The calf she lost was the first one she ever had. W. H. K., Lemasters, Pa.—Give her a teaspoonful ginger, a tablespoonful gentian, and same quantity of powdered licorice in damp feed 3 times a day. She should be well fed.

Wounded Hock.—Some ten days ago one of my horses cut hind leg on barbwire, this wound is on inside of hock, it is 3 inches long and about three-fourths of an inch deep. I apply a lotion made by dissolving a teaspoonful carbolic acid in two quarts of soap suds. I also apply a commercial surgical dressing. The wound neither heals nor does it change much. J. H. W., Glenshaw, Pa.—Dust on equal parts oxide of zinc and boric acid twice daily, don't apply salve, but occasionally paint sore with tincture of iodine.

Severe Cold; Nasal Catarrh.—For the past two weeks one of my horses has had a severe cold, at first the discharge from nostrils was of a watery nature, now it is thick and of a yellowish color. He has a hard cough. I keep him in stable. Will you tell me what to do for him, also state if you believe this ailment is contagious or not. W. J. M., Monticello, N. Y.—This is not a contagious or infectious ailment, but is perhaps the result of exposure during a sudden change of temperature, from hot to cold. It will do no harm to let him run out day time, if the weather is dry and not stormy. Give him one-half dram ground nux vomica, a teaspoonful ground red cinchona, and a tablespoonful powdered licorice at dose, in damp feed, 3 times a day. Apply one part turpentine and three parts olive oil to throat twice a day. He should be well fed.

Cow Fails to Breed.—We have a cow that came fresh 14 months ago, since then she has failed to get with calf. I forgot to say she comes in heat regularly, seems to be in good health and been served by three different bulls. What had I better do with her? A. B. M., Meadvile, Pa.—You fail to state whether she has any vaginal discharge. If she does, have your veterinarian wash her out with a tepid solution, made by dissolving 25 grains permanganate of potash in one gallon of tepid water. Unless you have had experience in doing this kind of work, better employ a competent veterinarian. In some such cases a mummified fetus causes similar trouble.

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125 Purebred Holstein Cattle 125
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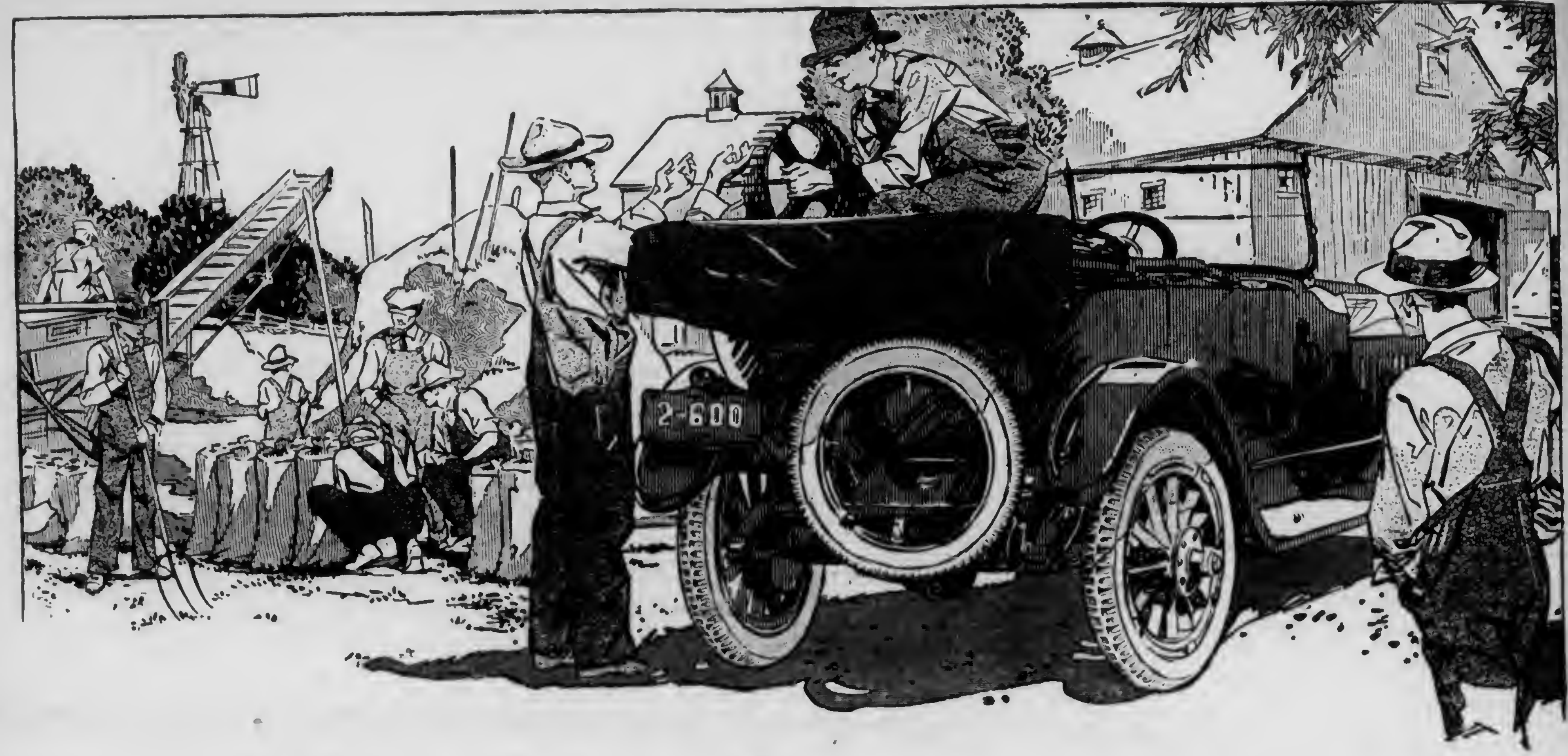

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AGRICULTURE
THE KEYSTONE OF
NATIONAL PROSPERITY

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Corn Silage vs. Corn-Soybean Silage

An Interesting Experiment With a Surprising Result

By CHAS. M. CUMMINGS

PENNA. EXPT. STATION

The practice of ensiling a mixture of corn and soybeans is becoming common in some localities. It is the popular belief that such a silage mixture has greater feeding value because of the increased protein resulting from the presence of the soybeans. Farmers have generally reported a higher milk yield from feeding corn-soybean silage than from feeding straight corn silage. Whether the extra protein in corn-soybean silage will enable one to feed less grain, or an appreciably wider and cheaper grain mixture, has apparently, up to this time, been a subject of little investigation. During the past winter the writer and Professor S. I. Bechdel conducted a comparative test which indicates the relative feeding value of corn-soybean silage and straight corn silage for milk and butter-fat production.

Plan of Experiment

The general scheme was to select two groups of animals, of 8 cows each, as nearly alike as possible, considering breed, age, stage in lactation, milk and butter-fat production and weight, and to feed each group hay and silage according to weight. All animals were to receive 3.25 pounds of silage and .7 of a pound of hay for each 100 pounds weight. Grain was to be fed according to milk yield and the percent of butterfat in the milk; thus, Guernseys and Jerseys would receive 1 pound of grain to each 3½ pounds of milk; Holsteins and Ayrshires 1 pound of grain to each 4 pounds of milk. The feeding experiment was to cover a period of nine weeks. During the first four weeks Group 1 was to receive corn silage, and Group 2 corn-soybean silage. The second, third and fourth weeks were to be taken as a period of comparison. At the end of the fourth week it was planned to shift the silage feeding, Group I receiving corn-soybean silage, and Group II corn silage, and to take the sixth, seventh and eighth weeks as the second period of comparison. At the end of the eighth week both groups were to be fed corn-silage and the feeding to be continued one week. The grain mixtures and hay were to be identical for both groups. The main plan was to feed a grain ration deficient in protein to see if the added protein in the corn-soybean silage would result in an increased milk flow, an increase in butter-fat production, or both.

All animals were to be weighed on three consecutive days, at the beginning of the first preliminary period, at the end of this initial period, at the beginning of the second preliminary period and at the end of the second feeding period.

Milk and butter-fat production and gain or loss in live weight were to be used as a measure of the relative feeding value of the two kinds of silage.

The Two Kinds of Silage

The same variety of corn was grown in each case. The corn-soybean mixture was obtained by planting soybeans with a hand seeder in the same rows with the corn. In proportion by green weight the soybeans in the corn-soybean mixture amounted to approximately 30 percent. As large a percentage of soybeans as this could not be hoped for under ordinary conditions as the viability of the seed corn used was rather low.

Ensiling took place when the corn was well glazed and when the soybeans were well podded. It was necessary to add some water to the corn silage to insure its preservation, as it was somewhat advanced in stage of maturity. Both kinds of silage were of good quality and were relished by both groups of cows.

Vetrified Tile Make Permanent Fire-Proof Farm Buildings

The Two Groups of Animals

The two groups of animals used in the feeding test bore a close similarity in point of breed, age, stage in lactation, production and weight. A slight dissimilarity in breed was introduced by placing a Brown Swiss cow in Group I opposite a Jersey cow in Group II. The difference in average age was only eighty-four days in favor of Group II, the cows in this group being, on an average, eighty-four days older than those in Group I. Group I had a slight advantage in stage of lactation, having been in milk for a shorter period. In average milk production per cow per day, Group I also stood a little in the lead. The two groups were almost identical in average fat production, the difference being, at the start of the feeding test, only .49 pounds per day.

Plan of Feeding

As has already been mentioned, it was proposed to feed a grain mixture having a wide ratio of digestible true protein to net energy. It was not feasible to make analyses of the roughages and grain previous to the beginning of the experiment. Therefore it was necessary to use average analyses as given in Pennsylvania Experiment Station Bulletin No. 143. By taking these figures a grain mixture was made up which had a ratio of digestible true protein to therms net energy of 1:5.32.

Taking the requirements for milk production and analyses of feeds, as given in Bulletin No. 143, it was found that an average cow from either group when receiving corn silage and when fed according to the scheme already outlined in the plan of the experiment, would consume a deficient quantity of protein.

At the close of the feeding test a complete chemical analysis was made of the two kinds of silage. It was found that the percentage of digestible true protein contained in each was practically the same. This is not surprising in view of the fact that the corn-soybean mixture contained a slightly higher percentage of moisture than did the corn silage. On the other hand, if we compute the percentage of digestible true protein the corn-soybean silage would have contained, had it held the same proportion of moisture as the corn silage, we see that even then the corn-soybean silage would not have been appreciably higher in digestible true protein than was the corn silage, the figure being 1.02 percent digestible true protein in the corn-soybean silage and .858 percent in the straight corn silage. So far as the digestible true protein is concerned, a cow receiving corn silage would consume practically as much digestible true protein per day as would be the case if corn-soybean silage were fed. For example; if a cow were fed 30 pounds of corn silage per day she would receive .257 of a pound of digestible true protein from this part of the ration; if fed corn-soybean silage, she would consume .306 pounds of digestible true protein in the daily allowance of 30 lbs.

By computation the digestible true protein required and the amounts that would have been received by Groups I and II during the second, third and fourth weeks of the experiment, which is the first period of comparison, had both kinds of silage contained like percentages of moisture, is found. It is observed that even on this basis Group II would have received only 85 percent of its requirements of digestible true protein, while Group I would have received 83 percent of its requirements. We should not expect, therefore, that the results would have been materially different had the corn-soybean silage contained the same proportion of moisture as did the corn silage.

Care of Animals

The cows in each group received the same care and treatment. They were kept tied up in the stable, except for two or three hours on fair days, when the groups were turned out in separate enclosures. Feeding of grain, hay and silages was carried out as originally planned. All feed was weighed daily for each animal and a weekly feed schedule prepared. Any feed not eaten was weighed back. Little weighing back was found necessary as both grain and roughages alike were quite palatable. The corn-soybean silage was eaten with somewhat more relish than was the corn silage, yet little of either kind was left in the mangers.

Keeping of Records

Accurate records were kept of production, of feed and of other necessary details. All feeds were weighed individually and the weights expressed in pounds and tenths of pounds. The percent of butterfat in milk from individual cows was ascertained by applying the Babcock test to weekly composites. Chatillon scales were used in weighing both the milk and the feeds.

Discussion of Results

In comparing results on the basis of fat production it was observed that the average yield of butterfat for the week of preliminary feeding was .15 of a pound higher for Group I, which received corn silage, than for Group II which received corn-soybean silage. Upon taking the sum of the averages of fat production per cow per week for the three weeks following the preliminary feeding; viz: the first period taken for comparison, it was found that Group I, on corn silage, produced 24.24 pounds of fat, while Group II, on corn-soybean silage, produced but 23.58. After the silage feeding was shifted, at the end of the fourth week, Group I continued to produce the greater amount of fat. During the second preliminary feeding of one week, Group I, which received corn-soybean silage, produced an average per cow of 7.52 pounds of fat, while Group II produced 7.14 pounds of fat, a difference of .38 of a pound in favor of Group I. The sum of the averages of fat production per cow per week for the three weeks following the second preliminary period; i. e., the second period taken for comparison, was 22.88 pounds of fat for Group I which received corn-soybean silage during this period, as compared with 20.56 pounds of fat in favor of Group I. This is a slight gain over that of the first period taken for comparison.

If now we compare 24.24 pounds, the sum of the averages for fat production of Group I, for the first period of comparison, when corn-soybean silage was fed, with 22.88 pounds, the sum of the average fat production of Group I, for the second period of comparison, when corn-soybean silage was fed, we find a decrease of only 5.6 percent in fat production during the second period of comparison.

On the other hand, in the case of Group II, a like comparison shows that the yield of fat decreased from 23.58 pounds, on corn-soybean silage, to 20.56 pounds on corn silage, a falling off in fat production of 23.8 percent during the second period taken for comparison. These comparisons indicate that corn-soybean silage maintained the fat production slightly better than did the corn silage.

A comparison of results on the basis of milk production did not show quite as marked a correlation as one would ordinarily expect. During the preliminary period of one week the difference between the average production per cow per week for the two groups was 16.96 pounds of milk in favor of Group I receiving corn silage. For the three weeks period of comparison following, the marginal difference decreased slightly. The sum of the averages of fat production per cow per week, for the second period of comparison were 599.08 pounds of milk and 557.92 pounds of milk respectively for Groups I and II, a difference of 41.16 pounds in favor of Group I receiving straight corn silage.

The advantage for Group I, in the second preliminary period, when Group I received corn-soybean silage, was 14.46 pounds as compared with 16.96 pounds for the first perliminary period

(Continued on Page 9.)

METHODS OF RENTING FARMS

Some of the Various Plans in Use Between Landlord and Tenant

The time of the year is coming when farms will be rented or leased, so this subject is in order. The usual ways of renting are: first, for a cash rent, which works out under some conditions and in some sections very well under a long lease, especially where there are no buildings to keep up, or in a trucking section, or for pasture lands.

The second and most common in Central Pennsylvania is for half the grain grown. The tenant finds all the stock and implements; the owner and tenant each furnishing half the grain and seeds sown or planted, and each paying half the taxes, or more or less of the taxes as they may agree. This system of renting generally works out satisfactorily in grain growing counties and also where hay is grown and sold.

But, since milk has been so much in demand at higher prices, some tenants may be tempted to keep more cows on pasture and allow them to eat off all second growth in clover fields, so no clover seed can be grown for which seed the owner would get half the money, while from the milk he gets nothing. This leads to the third plan of renting, or a half-and-half ownership in stock and implements and an equal division of everything grown or produced on the farm.

A Type of Body For Large Bulk Loads

It is a partnership plan in which the owner furnishes the farm, half the stock, feed and implements, and the tenant furnishes half the stock, feed and implements and furnishes all the labor to run the farm. Both owner and tenant will pay half the repairs to harness and implements, each half of the cost of threshing, silo filling and hay baling and half of all seed, feed and grain bought. Then each will get half of the hay, grain, stock, seed, milk, potatoes, apples or truck sold from the farm, as well as chickens and eggs.

This seems to me to be the fairest way to lease a farm for both owner and tenant; for each has a chance to share any gain in every way from the products of the farm, and each must furnish his half of the stock and feed, and each bears his share of any loss.

Now, if it pays better to produce milk, the owner will be more willing to build a silo or silos and to furnish materials to keep up the fences, since he gets an income from the cows kept, and may be willing to help buy foundation stock for a better herd of cows than the tenant could do alone.

The same is true with hogs and chickens, and he will want good horses, too, if it pays to raise colts. Another advantage of this system is that many tenants do not have enough money to properly stock a farm when they begin farming, and by going into partnership with a farm owner, they can begin better equipped and make more money.

Again, this method will be an inducement for an owner to feed more or all of his oats and corn to stock on the farm instead of selling all his grain which, when fed on the farm at a profit, will enrich the farm more than when only one-half of the summer grain is fed as is usually done under the second method of renting.

Frequently an owner who has been farming his own farm wishes to retire from the farm, but has a good line of implements, and a herd stock which he has bred himself and does not like to see the work of his breeding scattered by a public sale. He can take into partnership a young man with some money and who wants to begin farming, and sell him half his stock and implements at an appraised value, possibly calling in a third man to agree on the value of each implement and animal. Both owner and tenant should keep a copy of this inventory or bill of sale for the future. Each month as the milk check comes it is divided equally between landlord and tenant, or one can take the check, pay feed and repair bills and divide the remainder.

So it will be when any article, animal, or grain is sold. After the expenses are paid the amount left is divided. Should either party wish to end the partnership, they can have an appraisement again and one buy out the other's half or they can sell at public sale. Where this system of renting has been tried, it is satisfactory to both parties, and will become more general after it is tried. —J. N. Glover, Union Co., Pa.

THE ICE HOUSE

The best material for an ice house either above or below ground is stone, concrete, brick, or hollow tile for out side. Studded to have 1 or 2 dead air spaces on the inside below ground, and 2 or 3 if above ground Below ground where the ice can be put in readily is the easiest filled. If in the bottom of the house the water inclines to raise, or no drainage is provided the situation may be utilized by carrying away a drain pipe in which is placed a water trap similar to those used in lavatories, in no case leave the pipe open to the air. Yet where water inclines to raise it keeps the bottom of the house warm and is little better than a house entirely above ground. All houses should be constructed to give a free circulation of air over the house under the roof, and with not less than 8 feet of space above the ice by the time warm weather is due, say May 19th. If ice is required for market you cannot avoid placing while filling, and piling as solid as possible, otherwise it can be dumped in and leveled off about every three feet as filled and broken down with an axe and all crevices filled. It is not profitable to lose too much time placing ice as it is cheaper to house more, entailing less expense.—A. B. Huey.

Some hens keep summer boarders in the shape of lice and mites. The energy absorbed by these parasites will never go into eggs and meat.

Late Blight and Potato Rot

The late blight and rot disease of potatoes has already caused the loss of several millions of bushels along the Atlantic coast from New Jersey to Maine. This attack followed the heavy rains in July which spoiled so much wheat in the shock. The losses to the growers have been immense, not only from the bushels lost, but because the presence of rotten stock on any market makes every buyer from country shipper to city housewife so afraid to buy that prices fall. Now the disease has spread westward to cover most of New York State and the northern and central parts of Pennsylvania. I have recently traveled several hundred miles in this section and found many fields with vines all dead. In the rest, the disease was nearly always present on the leaves, often so few being affected that the owners did not know that it was there. The great danger now is that a rainy period may fill the soil with water and the tubers will be infected with rot by the germs from the leaves before the vines are killed by frost.

Rotten potatoes from the coast sections have driven prices to the growers there below a par with the western shipping sections with sound stock. Last week carloads of New York and Pennsylvania potatoes came on the Scranton market badly infected with rot, tho the potatoes had appeared perfectly sound when shipped.

A Wet Weather Disease

Late blight and rot is a wet weather disease, spreading fastest in air damp by fogs or rain, and at temperatures from 70 to 80 Fahrenheit. Hot dry weather promptly kills it. Many growers mistake hot weather troubles like sun-scald or tip-burn for late blight. The genuine disease can be told in two ways, first by the fine gray down on the under side of blighted leaves, the germs which spread the disease, and second by the rot which these germs cause when they reach the tubers. The dry weather troubles do not cause rot. Sometimes when the soil is dry late blight caused by foggy weather may not cause much rot as the germs do not easily reach the tubers. When a heavy rain comes with part of the leaves still alive millions of germs fall on the ground from the under side of the leaves and the water in the soil carries them to the tubers to start rot spots on them. Experienced growers know how the rot often attacks the largest tubers and these on the upper side close to the seed end. That is because the soil protection is thinnest there and the larger the potato the greater the chance that is has pushed itself nearly out of the soil at the edge of the hill.

What can be done now that blight is here? Thorough spraying with bordeaux would have prevented the blight on the leaves and the rot which follows. Even now it may be of some value. So many growers have not sprayed that it is well for them to learn how to make rot loss from blight as smsll as possible. This year's crop is smaller than usual and prices will probably be high later, tho for a long time yet rotten stock on city markets will hold prices down till this is all gone.

Late Digging is Preferable

First, the grower must not dig until his vines are all dead for at least a week, better two weeks. Most people think they will have less rot by digging as soon as they see the blight on the leaves. Almost always there is less rot by delaying digging. There is far more danger of infecting tubers by touching them with the blighted leaves than by leaving them till the diseased leaves are all dead. By waiting all the infected tubers in the ground will show up plainly and the stock put in the cellar will be nearly free from rot if well sorted at digging. The less rot put into the cellar; the less chance of infection in the bin.

The next precaution is to dry the tubers well before putting them into the cellar, and keep them dry. That is hard to do as with colder weather the cellar moisture condenses on the potatoes. The remedy is to cool the cellar after digging by opening doors and windows at night and closing in the day. The disease spreads only under damp conditions and at above 51 degrees Fahrenheit. Lime and other disinfectants have been advised for use in the bin, but these are of little value because most cellar rot is due to germs which got inside the potato at digging time.

Should the soil be filled with water by heavy rains before the tops are killed heavy loss from rot cannot be avoided. But the grower who delays digging till tops are all dried up, who sorts carefully, who dries his potatoes before storing in cellar and then keeps them dry and cool will have very little loss in storage compared with the careless grower who gets excited and digs too early.—Daniel Dean.

Stop The Million Dollar Loss

A few days ago I saw John Dennis of Crawford County, Pennsylvania, start his grain binder for the thirty-second season. The binder worked as efficiently as the machine which we have used only several years, and on inspecting the gearing, which is particularly apt to wear, I observed that he should anticipate not less than five years more service. A statement has been made that it would cost one million dollars to replace weathered parts of farm machinery in the state of Wisconsin. Mr. Dennis stated that he had kept this machine housed, and had not spared oil. I noticed the painting which was yet fresh, and on the grain divider was stencilled the date of the last patent on this type machine, "1881." Mr. Dennis has owned this machine fifteen years, and it was considered an old machine, altho it had been well cared for by I. A. Butler, one of the older "good farmers" of Crawford County. Mr. Butler had used the machine for his own harvesting, and had done many acres of outside reaping. Fifteen years ago, the type machine was considered obsolete, and at Mr. Butler's sale, Mr. Dennis bid off the machine for only $5. Mr. Dennis states that he always removes the canvas if the machine is to stand for a little time, and that when the machine is not in operation, the canvas are loosened. All strips are kept carefully tacked, and his upkeep expense has been less than two dollars. His acreage has not been large during the fifteen years, but many farmers have cut less grain, and are using perhaps their second machine.

Porch Floor and Pillars Made of Concrete

According to conservative figures the depreciation on grain binders at present prices of $225 is $18 a year. I know a binder which has not cut more than ten acres of grain each year for the past five years, and it is ready for the junk heap. The machine has been housed under an apple tree, and protected winter and summer by the binder canvas. It would have paid this farmer handsomely to have hired his grain cut.

I know another binder which was purchased by a Crawford County farmer for $15. He paid for it by reaping at $1.50 an acre. This machine was purchased by a "back to the lander" and his first discouragement was, I am told, occasioned when he drove thru his grain field, the machine still on the trucks, and it failed to cut grain. The owner stored it over winter in a shed in which chickens roosted, and when he failed to make it work the next year, he sacrificed it to a farmer who could do so. I know another binder which a farmer gave to his son-in-law, as a worthless piece of junk, and all the attention it required aside from repairing the canvas, was tightening a few bolts, and replacing some that were lost. It is not the big things that damage a farm machine, it is the little things that require attention and cause trouble.

We purchased a grain drill which would now costs over $200. The discs were rusty, the former owner had evidently tried using it for a lime spreader at one time, and there was evidences of acid phosphate having been badly caked. He had started the drill and some of the star wheels in the fertilizer attachment were broken. It had stood out one winter, and the depreciation on this machine had been nearly 70 percent as it cost him nearly $100. Ten dollars put the machine in shape, and housing, a coat of paint, a thorough cleaning makes it possible for this machine to do the service of a new machine. I know a gasoline engine which had been sold for $12. It had not done over five days actual service. A part was broken, and one or two springs had rusted badly. New batteries, springs and a casting cost less than $13, making the actual cost of this $125 engine, about $25. Here was 80 percent depreciation owing to weather, and a week's work. When I saw the engine it had given the new owner three years service.

The paint brush and the implement shed will save the dollars which will pay for the wife's motor washer, the electric light plant, the heating and water systems.—W. J., Ohio.

Room Enough For All

I do not think the horse will ever be entirely superseded, at least not till mud and snow are conquered in all localities, and comparatively few farms can ever dispense entirely with four-footed traction, besides, I think there will always remain some people with sufficient individuality to use a horse if they prefer to do so.

I am not trying to detract from the real value of the tractor, the motor truck, or the auto, they all are very useful, and mark an epoch in the conquest of mind over matter. For instance, a short time ago I saw a fellow get mad at his fliver and start kicking the radiator! The repairs cost him ten dollars, and probably set him to thinking; another step in the evolution of brute to man.

Some may say that it is sentiment, and retroactive sentiment at that, which prompts the statement that "the horse was here before the motor vehicle, and he (or his owner) has at least an equal right on the road!" Well, maybe so, but it was just such sentiment that caused the civilized world to halt the march of "kultur" recently.

I claim there is plenty of room for both motor and horse, and it is deplorable and disgusting to note the tone of some periodicals, fawning upon motor advertising, which would have you think that the only thing for the horse and his owner is to "get off the earth," so it takes considerable moral courage, which after all, in this case is only a manifestation of commonsense, to assign the horse to his proper sphere of usefulness, and at the same time, "fight for the right of your neighbor to disagree with you."

After plodding for untold generations thru mud and mire, and straining muscles over rough and frozen ground, because he could, or belabored by ignorantly brutal drivers when these conditions caused failure, friend "Dobbin" sees these same roads transformed as by a miracle to make them fit for motors!, and by this transformation in many cases made so hard he cannot get a foothold to pull, and so smooth he cannot keep his feet. His owner asks for a track at the side of the great highway, and is answered by the newspaper-made argument that it "will soon be all tractors," and argument that goes only with the unthinking. It has even been said "the automobile tax has built the state highways, and they alone should use them" a very narrow argument, specially contrived by road hogs, who should be reminded that they took the old road, usually.—Wm. A. Libby, Marsteller, Pa.

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HORTICULTURE

NATIONAL VEGETABLE GROWERS' MEETING

Condensed Report

(Continued from last week.)

At the Wednesday morning session Prof. A. H. MacLennan gave a brief outline of the experimental work in vegetable growing in Ontario.

"Celery blight is more common than most people believe. We find that to combat the blight successfully it is best to start with the plants at the seed-bed stage and give them an application once a week, and if done that way it will be likely to prove more satisfactory than when done every ten days. We are using more of the knapsack sprayers than usual and find them more satisfactory than the larger machines. We use tobacco extract for the blight.

Onions of Shape Demanded For Boiling

Onion Thrip

"Another thing we have been working on this year is onion thrip, which has practically ruined the entire Ontario onion crop. One of our largest growers reports less than one-third of a crop. Where we were prepared for it we were able to save our crops so that they would make fairly good second grades by using seventy-five pounds of nitrate of soda to the acre. The trouble with combating this disease is that growers do not recognize it until the insects have eaten off the stems. One man saved his crop by making three applications of nitrate of soda.

"Another new problem we have had to deal with this year has been that of stink bugs destroying asparagus beds. We found that we could drive it off with tobacco extract, but we could not in any way repair the injury already done. The particular kind of stink bug we found was a small one that burrowed down into the crown of the plants and did great damage before it could be noticed.

"In our experiments with fertilizers we have used acid phosphate and bone flour on tomatoes and obtained some wonderful results. I have never seen such tomatoes as we obtained from the use of four hundred pounds of bone flour and eight hundred pounds of acid phosphate to the acre. In figuring the quantity of phosphorus in these materials do not get the bone flour and the bone meal mixed for the phosphorus in the bone flour is in a more readily available form. The dry weather this year has made some of our experiments with fertilizers rather unfavorable, but we are going to continue the work until we can get our growers to using them more intelligently.

Prof. E. O. Fippin, of Cornell, discussed "The Use of Lime and Commercial Fertilizers With Vegetable Growing," from the following angles:

"Because a particular type of soil in New Jersey gives the best results for potatoes is no sign that such a type of soil will give the best results in a different locality, for climate is an influencing factor in determining the soil requirements of crops. In a northern climate the more sandy soils are best adapted for potatoes, while in a southern climate the heavier soils produce the largest crops.

"The importance of well-drained soils that have good water-holding capacity is not appreciated by the majority of vegetable growers. The humus problem is one of the most perplexing ones confronting vegetable gardeners in proximity to large cities, for, with the passing of the horse and the coming of the automobile truck, the gardener is robbed of his usual supply of manure so that he must make plans to maintain an adequate supply of humus by growing green manure crops to plow under. Here, too, is connected the problem of growing such legume crops as beans, peas, as well as clover, vetch and other soil-improving crops. I know that I am not likely to receive a warm reception from vegetable gardeners when I advocate the growing of green manure crops, but I am sure that the time is close at hand when you will be compelled to adopt this method of maintaining an adequate supply of humus in your soils. As a rule, it will pay to fertilize the green manure crop rather than to allow it to shift for itself, for the one big object in growing green manure crops is to produce a maximum amount of humus and plant food.

"While bone meal is excellent for growing vegetable crops we must depend largely upon acid phosphate as a source of phosphorus. I feel sure that potash has a necessary function in growing vegetable crops. Of course, if you have an abundance of stable manure you will already have in your soil sufficient potash in a readily available form. Lime occupies a place in plant food economy equal with the actual plant food elements. The organic matter in the soil rests largely upon legumes, and the legumes rest to a certain extent upon lime. The tendency of soils is to swing toward a sour or acid condition so that the lime problem is to help the soil in the range of the requirements of the different crops. In no other type of farming does lime occupy a more important place in the economy of plant growing than in growing vegetable crops, which is one of the most intensive types of farming. Lime seems to accomplish some of the functions of potash. It

also aids in helping out the phosphorus problem. It is very important if you are using any of the carbonate forms of lime to insist upon it being ground into fine particles, no larger than will pass readily thru a fifty-mesh screen.

"Caustic lime has been reported to destroy humus, but, no matter how many times it may be reported, it is not so, for there is no possible destruction of organic matter by the use of caustic lime. On the practical side caustic lime is used by manufacturers of sugar, and for removing hair from leather, so that the question of deciding between caustic lime and carbonate of lime is purely a matter of cost and convenience. But caustic lime, when conditions are favorable, has greater possibilities for soil improvement than carbonate of lime. Small applications frequently are preferable to the use of larger amounts. Lime should be thoroly mixed with the soil so that applying it to the plowed ground and working it in is the most practical method of applying it. In no place has lime a more important function to perform in soil management than in vegetable growing. The use of lime must be regarded as a part of a scheme to develop a permanent system of maintaining soil fertility."

Muck Land Problems

"We know of many gardeners" said Ezra Levin, Michigan's muck crop expert, in his address on the above subject, "who have tried to farm muck land and have failed, while many have been successful on high lands.

"Our muck soils are entirely organic, that is they originally came from deposits of vegetable matter that had been covered by water year after year until we have a great big silo, as it were, of organic matter. They contain an abundance of nitrogen. Samples will run 1.5 percent nitrogen. The problem is to so handle the land that the nitrogen will be released as needed. It is not necessary to plow down cover crops. It is found that muck soils under cultivation change in character in three years. The important matter in the handling of our muck soils is the decomposition of the muck, by the use of manure supplemented with acid phosphate, which we find tends to break down the muck and releases and makes available the nitrogen that is in the muck itself.

"An important consideration in connection with this method is the effect on soil bacteria. We believe the application of phosphoric acid is for the purpose of hastening nitrification by the bacteria. In experiments where sodium nitrate was used, this supplied nitrogen in the early part of the season when the soil bacteria were not active in the cold soil, but the final results were the same as where an application of acid phosphate was used.

"The reason we get a large leaf growth on muck soils is due to an excess of nitrogen. We roll muck to repress the nitrogen. If we want the crop to grow well, we naturally will cultivate the soil more to release nitrogen. One can keep down the leafiness of cabbage and make a solid head by rolling the soil and keeping it compact. The object in cultivating muck soil during the growing season is to keep down the weeds.

In answer to a question as to the efficiency of lime on muck, Mr. Levin said the beneficial effects were not perceptible. The application of small quantities of manure will break down the muck so that the lime in the muck will be released, and it does not pay to apply lime. Regarding the application of salt to muck, this is a practice that has been discontinued, and experiments do not reveal any satisfactory results. In reply to the question as to whether burning over of muck is injurious, it has been found that burning removes the valuable top layer, and it will take years of cultivation and application of manure to restore the fertility removed by burning."

Round Table Discussion on Diseases of Muck Land Crops

The round table discussion was conducted by Professor G. H. Coons, of M. A. C. Professor Coons made the observation that a general talk on diseases of plants might not be a solution of the problems of those present, as it is the specific problem that ought to be discussed. "The essentials to be considered are sanitation, plant protection and the use of disease resistant varieties. Fully fifty percent of the products grown are wasted thru fungous diseases, etc., before they reach the consumer, which fact bears a close relation to the price the consumer has to pay."

Regarding the matter of celery blight with which one grower had trouble, Prof. Coons said this is distinguished from the ordinary celery blight, in that the former is a brown color and is found to attack the golden varieties of celery. This is known as the bacterial leaf spot. While it has never been known to destroy the whole crop, the celery is disfigured and is discriminated against in the market. At Cornell they have controlled this by spraying with Bordeaux mixture. This is undoubtedly an infectious disease, but it does not cause rotting of the stalks.

Regarding late blight of celery, the speaker said that late blight is no doubt carried over from year to year. With late blight every rainy period is a danger period for celery as the moisture opens up the fungous spores. Rains coming in close succession in the early part of the season will do more damage than the same amount of moisture thruout a longer period. By intelligent application of control spray, it is possible to prevent blight to some extent. Many market gardeners make it a practice to spray celery regularly.

The possibilities of the selection of disease resistant plants was touched upon. After a serious outbreak of cabbage yellows in a Wisconsin field, it was found that there were but three sound heads that to all appearances were disease resistant. After taking these three plants and using them for the production of seed, a new strain has been developed called Wisconsin Hollander No. 8, which has been found to be from ninety to ninety-five percent disease resistant.

In this connection Professor Coons said: "When the farmer is challenged to reduce the price of his products his answer is going to be greater efficiency in producing disease resistant varieties, thus reducing losses in marketing. I believe we have only just started in this study. There are several instances of the production of such strains. There is a rust resistant asparagus developed in Massachusetts. Some growers claim to have found strains of tomatoes that are immune to blossom end rot, the variety mentioned being Bonnie Best, while one grower claimed to have developed a strain of the Earlianna which he has found to be resistant to this disease. The grower is coming to a closer study of the life history of the various plant diseases."

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ESTABLISHED 1880 PUBLISHED WEEKLY

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VOLUME 46 NUMBER 11

Our job is to serve our readers. Whenever and wherever we can help you, write us.—The Editors.

Educational Congress

SUPERINTENDENT of Public Instruction, Thomas E. Finnegan, is planning for an educational congress to be held in Harrisburg the week of November 10. Leading educators from all parts of the country will be present to confer and advise in the many problems of modern education. The opinion is general among educators as well as with the public in general that there should be an adjustment of the work of the schools to meet the new conditions growing out of the war. No place is the need of revision greater than in the system of rural education and it is to be hoped that the congress will be able to formulate a plan in which the essential differences between city and country needs is recognized and provided for. Not only are the questions of curriculum, grading, and buildings important, but the problem of raising sufficient money to run the rural schools as they should be is a most pressing one—one that the legislature has so far failed to solve.

High Grade Fertilizer Used

THE Educational campaign waged during the war time to induce the use of high grade fertilizers instead of the low percentages used previously has been highly successful according to manufacturers' reports. In 1918, only 37 percent of the fertilizer sold was of high percentage goods, while the figures for 1919 so far indicate that 60 percent was high grade fertilizer. The manufacturers as well as the farmers are to be congratulated on this showing—the former for their willingness to make and urge them, and the farmers for their recognition of the economic principle involved. Farmers would kick if they had to buy diluted sugar, corn chop, etc., yet they have purchased millions of tons of greatly diluted fertilizer in the past, and have even insisted upon having it. The cost of freight and handling, to say nothing of the cost of manufacturing the excess filler in low grade goods has been immense and might well have been expended in more plant food if farmers had learned this lesson long ago.

Sane Labor Counsel

IT IS most refreshing and heartening in these days of numerous strikes—potential and actual—to note the sane expressions of some labor organizations. That labor is not fully or justly represented by strikers, led as they frequently are by radicals having unAmerican ideas, is shown by resolutions adopted by some labor organizations. The employes of the Midvale Steel and Ordnance approved unanimously resolutions declaring that the high cost of living can be abated only by "diligent, efficient and conscientious labor, by thrift and avoidance of extravagance;" that "the interest of the worker is in real wages and not in nominal wages, and that the way for him to get more is to stabalize or lower prices by producing more;" that "any workman who demand a greater proportionate return for his labor than his fellow workmen in other lines are geting is as guilty of profiteering as a grocer who charges exhorbitant prices for the necessaries of life."

A committee of the New York Federation of Labor made a report which contains some good, honest advice. It asks all who have attained an 8-hour day to work for as much production in eight hours as was formerly produced in ten hours. It also recommended that no strikes be declared for six months, and that all strikes now waging be stopped at once. It also asks that employers be given a reasonable time to adjust difficulties with employes and with strike employers before labor acts to engage in any strike.

There is little evidence that intelligent, home-loving, American labor is in sympathy with the extreme demands of some of the leaders who, according to present indications, are more intent upon an economic revolution in this country than in wages and hours. The real welfare of labor is not advanced even by the temporary success of many of the movements now on foot.

Mixed-Feed Laws

EVERY dairyman and poultryman should rally to the support of a uniform mixed feed law which some day will be incorporated in the control laws of the country. The loss to honest mixed feed manufacturers, dairymen and poultrymen alike, arising from the present inadequate regulation of the mixed feed business is incalculable. When conditions in the mixed feed business become so acute that honest manufacturers call a halt, it is time for the buyers of these feeds to support legislation calculated to prevent worthless materials from being mixed and sold at fabulous prices.

In our efforts to reduce the high cost of living and encourage the development of a more remunerative system of live stock husbandry the question of clean and wholesome feedstuffs is of paramount importance. Thousands of farmers who formerly depended upon these "feeds of commerce" have lost confidence in them, because some of them no longer yield profitable returns, or they prove detrimental to the health of their stock. Some of these feeders have returned to the old practice of depending entirely upon farm-grown feedstuffs which has necessarily curtailed milk production, and advanced the prices of their products to the consumer.

Dairymen and poultrymen in the eastern states have purchased so much junk feed during the past few years that several states have enacted, or prepared to enact feed control laws, to prevent the sale of worthless materials disguised as mixed feeds. The Lever Feed Bill, known as the "United States Feed Act" should be made strong enough to prohibit the use of all worthless materials masquerading under the name of mixed feeds, or force manufacturers who use such materials to use labels telling the source and origin of all materials used in their mixed feeds. It should have the support of every dairyman, poultryman and honest mixed-feed manufacturer in the country. There is a legitimate place for ready mixed feeds of the right kind, but it should be impossible to palm off spurious mixtures upon the uninformed public.

Benefits of Storing

IN AN aricle criticizing the Department of Agriculture, "The Canner," of Chicago, makes a few statements regarding the Government encouraging farm storage of food products which might prove interesting if they bore any semblence of truth. The meanest kind of a writer is he who delights in keeping the public mind in a turmoil by misrepresenting and falsifying facts without getting at the bottom of things to search out the truth. After reading this article and posting ourselves on the prices of canned goods, we want to have the writer of the article in question inform us if the public would be better off if the canners, speculators and jobbers were permitted to gain control of such products immediately after harvest, than they are under the present plan of storing by producers.

Here is a gem from the article: "Some departments of the Government are doing all they can to put a stop to food storage and hoarding and are stigmatizing those who store and hoard as rogues and profiteers, and yet another department of the Government at the same time is advocating storage and makes no attempt to conceal its purpose in doing so is to enable growers to obtain higher prices, as if it were not as desirable for the grower to contribute something toward reducing the cost of living as for the canner or the grocer."

The proper storage of products, whether individually or collectively, is the only means the producer has of avoiding severe losses. It makes him independent of those who are continually "bearing" the market when he has something to sell, and "bulling" it after they have secured control of the product until they have disposed of what they have in storage.

Any person familiar with the problems of producer and consumer, and who has their interests at heart, will not be slow to inform the public that farm storage is a big factor in stabilizing prices. It is the safety-valve of the present food situation; because the producer is not in a position to speculate beyond obtaining reasonable prices for what he has to sell.

A Fundamental Need

IF a man lived on a desert island he might say that his fire hazard was exclusively his own affair. Most people do not live on desert islands, yet they act as tho they believe that their own personal habits and the condition of their own premises concern no one except themselves. This short-sighted, self-limited view of personal responsibility has been getting the world into trouble for many thousands of years, and it will continue to get the world into trouble until people gain a new and truer viewpoint.

Fundamentally, man's need today is for a spiritual awakening. Our great questions are not questions of economics, for that is merely one of their outer symptoms; they are not questions of politics, for that is merely another of their outer symptoms; they are questions of the soul of man, and his recognition of his moral responsibility.

Fire Prevention Day offers a peculiarly valuable opportunity for emphasizing this fact. While fire in its service to humanity may stand for much that is good; fire in its destructive capacity is an almost perfect symbol of evil. It is self-propagating and spreads with startling swiftness wherever it finds fuel. It destroys that which it touches. It seizes upon beauty and leaves ugliness behind it. It finds usefulness and reduces it to barren waste. With a foothold once gained its extinguishment is a matter of hazard and of great exertion, and yet its prevention is almost ridiculously simple, its laws are well understood, and safety is invariably assured where vigilance is combined with understanding.

In all of these respects fire typifies the spread of evil and disintegrating ideas thruout the world. At the present time we are witnessing a striking object lesson of the destructiveness and the almost incalculable misery which may come to a nation when a moral conflagration has been allowed to spread. Efforts in this same direction are now being made in the United States with unexampled boldness and persistency. It is impossible to doubt the existence of a well-organized and largely-financed propaganda whose deliberate purpose is to break down our institutions and undermine our moral fibre. If this propaganda were to succeed in any large measure the United States could hardly escape the fate of Russia. This is not alarmist doctrine; it is the opinion of sane and clear observers by whom the menace is not underestimated.

The appeal today is for a grade of constructive patriotism, of high ideals of citizenship, of real regard for the safety and welfare of the public and of devotion to the principles of human liberty that is not less in degree than that which was manifested during the years of actual warfare.

Fire prevention is intimately and integrally a part of this whole view. It affords a concrete opportunity to proclaim and to illustrate truths which lie at the foundation of human relationships. The fundamental need is for a spiritual vision that shall see such truths, not as matters of dollars and cents, but as revelations of the soul of man.

Observe Fire Prevention Day, October 9.

HARRISBURG LETTER

The Business Man and the Farmer.—Some practical suggestions as to the way that the Pennsylvania business man, especially the so-called big business man, can help the food supply of the State, aid the farmer and the public generally were presented to the members of the State Chamber of Commerce at their first annual meeting here today by Secretary of Agriculture Fred Rasmussen. It was the first time that the secretary had spoken on the relation of business to farming in Pennsylvania and he gave the results of his study of the situation in the Keystone State the last half year and some facts regarding the present value of farm products and what they could be made to pay as well as reaching more people. The secretary said that business men had been successful thru forming associations and companies and that there was a tendency now to organize the farmers. The business people could help the farmer and aid materially in getting the right kind of farmers' organizations by studying the agricultural situation and offering to go half-way in solving the problems instead of standing off and calling names. With encouragement there can be created in this State co-operative concerns that can be of great benefit to the public generally. The secretary also called attention to the way the public, and especially the business man can help by assisting in the movement for proper grading of farm products. Agriculture, in the long run, is going to have standardized products just like a nail mill or a soap factory and the public can be of much assistance. Mr. Rasmussen brought home with considerable emphasis that Pennsylvania can feed many more people and develop her industries but that agriculture will have to be developed just as are the other productive agencies and not be allowed to just grow.

Linking Up Work.—Duplication of effort to "help the farmer," a slogan which was much heard about Capitol Hill for about four years, especially around primary or general election time, seems to be on a fair way to be eliminated from the State Department of Agriculture and its various agencies. For the first time in years there is a system of cooperation between the national government, the state government, State College and the farm bureaus as well as some agencies of a corporate and private nature. The people at the Capitol now actually know what is being done at State College, and Washington is spending money with Pennsylvania to get some results. The advice-to-the-farmer system is being handled now like the selling agencies of a big steel or furniture corporation and there is probably less running around in circles than for a long time.

The Immune Potato.—Director J. G. Sanders, of the State Bureau of Plant Industry, is of the opinion since his return from Great Britain, Ireland and Holland that the immune potato and compulsory planting of such brands is the only answer for the wart. Dr. Sanders says that his researches, in which he acted for the federal as well as the state government, showed that abroad the potato growers are ahead of those in this country. More care is taken in selection of seed, experiments have been made for years and developed the fact that there are numerous varieties that can be depended upon to resist the wart, the potatoes are sprouted before they are planted and they are cultivated more closely. In some sections the growers have varieties for different cooking purposes, while various colors figure in the growing. What Dr. Sanders has learned is to be put into a report for the national and state governments and may revolutionize some potato growing ideas. Meanwhile efforts to get immune potatoes and to study how they grow in this state will be made.

Institute Dates Set.—The farmers institutes of 1919-20 will be fewer in number than any season ever known since the system of holding meetings was launched and it is planned to have wider discusssion than heretofore. The institutes will begin the middle of December instead of the middle of November, and there will be only one meeting in places where two slimly attended sessions have been the rule. The farmers and others attending will be encouraged to present their difficulties so that the state specialists can get information as to what is wrong in any locality. Thru the new arrangement the state will get the services, for limited periods, of men of unusual experience and ability for lectures. And one of the features of the meetings will be singing designed to get everyone present in the spirit of the session rather than to have the old diffident hanging back way of doing things and growling later.

The Market Questionnaire.—The State Bureau of Markets started today to ask some 12,500 housewives in Harrisburg what's the matter with the markets in this city. A questionnaire with questions that any one can understand has been sent to every house with a request for an early answer. The postal authorities will cooperate with the state in getting in the replies and a close study will be made. The plan is to extend the inquiry to other cities. The questions ask about number of markets, proximity, what percentage of fruits and vegetables is bought at market and what at grocers; whether stuff is carried home from markets or delivered; how prices compare and so on with a request for some information as to what the marketer thinks is wrong.

No Extra Labor.—It is one of the interesting things about the numerous strikes that are taking place in this state that farmers have been unable to get extra labor. In years gone by when men went on strike, many of them, especially those raised in the country, would go home and help out on the farm and aid production while standing out for demands. This year there has been precious little back-to-the-farm business and the men have stayed in their home communities. Some co-operation between strike committees and the farmer who could use some strong hands would seem to be a good idea but if the suggestion came from any official source bricks would be thrown at it.

To Control Diseases.—The State Departments of Health and Public Instruction have established a system of cooperation which has never been known before on Capitol Hill and which will be one of the things for which Governor William C. Sproul, as much as any one, can take credit. Medical inspection is now a part of the course and now a series of health instructions aimed to prevent spread of disease among the youngsters has been put into the hands of every districts' officials. The request has been made that the suggestions which embody cleanliness, fresh air and systematic exercise be put into the hands of every teacher.

Girls and Trucks.—The Pennsylvania girl and the Pennsylvania motor truck have been the means of saving the peach and apple crops in southern counties this year. If the crops had been normal there would have been some waste. The boys all appeared to be too busy this year and the girls have been gathering the fruit—and the shekels, too. The truck has saved much loss of time in reaching shipping points miles away from the old point of shipment. —Hamilton, Harrisburg, Sept. 29, 1919.

NEW YORK LETTER

Results of Land Army Work.—Thirty young women have entered agricultural colleges of the state for training in scientific farming, as a result of their working on farms the past season or two. Many New York City girls who have done farm work have learned much of the practical work in planting and cultivating potatoes, and watching their marketing results. They learned much of practical housewifery as well as how to grow crops and vegetables. The work of recruiting land army workers is now in charge of Miss Blanche Corcoran, 36 Elm Street, Rochester, and several camps are already arranged for next year's work on farms.

No Helpless Paralysis Children.—As a result of the wonderfully good work done by the state's orthopedic surgeons there will be no crippled children in that section of the state centering in Syracuse. Remarkable gains have been made by the victims of the 1916 infantile paralysis epidemic, as the mothers and nurses in charge were taught how to give the little ones proper massage, manipulation and exercise to develop the affected muscles.

State Grange Blames Labor.—Officials of the New York State Grange representing 125,000 farmers issue a statement placing responsibility for the high cost of living upon united labor. The workers in nearly all industries but agriculture are blamed, saying that strikes have been an important factor in raising the price of food, clothing and shelter. The war has only hastened what thinkers have long seen coming. Rural workers have not received the support and encouragement which urban workers so easily obtain in form of better schools, roads, churches, houses, shorter hours and higher wages. Instead of developing a proper remedy, the city representatives propose to correct the high cost of living by arbitrary measures, setting a lower price on farm produces, etc., and thus make the matter worse by driving out of the business of production those now trying to continue in it. The statement emphasizes the need of an economic adjustment if the world is to be fed and agriculture preserved.

Cheese Market Bad.—Dairymen are watching the cheese market as one factor in setting a price on liquid milk. Several of the leading dairy boards of the state failed to set a price this week as the buyers would give no satisfactory prices. Plymouth was the only board to get a price of 27½ cents. Their total sales were 1,997 boxes, as compared to 2,065 boxes a year ago, when the price was 26⅝ cents.

Potato Market Slumped.—Heavy wholesaling brought the prices of potatoes in Central New York this week to an unjustly low price $1.25 a bushel and now to $1 in some places. Cortland County has a fine crop of potatoes that so far has not rotted so badly as some. And here the farmers who sell to dealers are not getting a fair price in face of the fact that the supply of potatoes per capita in the state and country will be ½ bushel less than usual. Long Island potatoes are rotting at a fearful rate. The state output will be at least 10 percent below the ten year average of production. There is great need of growers learning to sell this crop cooperatively.

Cabbage To Be High.—The cabbage crop of the state is far below normal with only 10 carloads forwarded last week as against 153 at that time last year. Early cabbage is now bringing $40 to $45 per ton. The kraut factories will have to buy on the open market this year as no contracts were made. The acreage is far under last year's and the yield not good. Cortland County is said to have the best of any crop in the state or the east.

Fruit and Other Crop Notes.—English buyers have been in the grape section making arrangements to export grapes to England. They are sure this can be done successfully with some varieties, despite early experiments that were failures. Stability of the grape industry seems assured despite prohibition. The crop is two weeks in advance of the season. Tomatoes have been the second in importance in crop movement, but the crop is short of what it was last year when 381 cars were shipped. New Jersey has already shipped over 700 cars. Over 200 cars of pears have cleared state points, as compared to 88 of last year at that time. Canneries have dropped the price on pears a cent a pound, and it looks as tho pears would continue to move late.

About 100 cars of peaches have been shipped to date with the estimate for Central and Western counties at from 1200 to 1800 cars entered. The apple crop according to the State Horticultural Society will be but 26 percent of normal or 21 percent in Western counties. Lima bean growers report a new worm pest that denudes the vines.

Small Notes of Interest.—Four purebred sheep were sold by a Fayetteville firm at the state fair for $1000. The buyer came from Norway especially to study fur bearing or Karakul sheep at this fair and to buy breeders for his fur company. The Barge Canal was first used last week for shipping 40,000 bushels of Argentine corn to a starch company. One farmer from Virgil, Cortland County, just sold 870 bushels of high grade Green Mountain potatoes from 3 acres at $1.25 per bushel. His young son sold 59 bushels from less than ¼ acre, as a result of extra good cultivation and care.—F.

NEW JERSEY NEWS

Morris County Fair.—One of the interesting features of the three-day exhibition by the Morris County Fair Association, was unusually good demonstrations of farm machinery of all kinds and of the most up-to-date and approved types. Special arrangements had been made to take care of the demand of these exhibitors, and thousands of farmers from the rich agricultural sections of Morris County were interested in the displays. Automobile dealers within a radius of fifty miles of the fair grounds occupied large spaces for demonstrating their trucks for farm work, while much space was used by dealers in agricultural machinery.

Farmers' Curb Markets a Success.—That farmers' curb markets being conducted in Jersey City, Elizabeth and Perth Amboy are giving the housewives of those cities complete satisfaction in serving them with fresh vegetables and fruits at prices considerably lower than they can be purchased elsewhere is the opinion of six state and municipal officials, following an inspection tour of the curb markets in those three Jersey cities. The trip was planned and conducted by Alexis L. Clark, chief of the Bureau of Markets of the New Jersey Department of Agriculture, who is furthering the curb market movement in the state thru his department. Other persons in the party were Alva Agee, secretary of the State Department of Agriculture; Jans Van Herwerden, chairman of the agricultural committee of the New Jersey Bankers' Association; Charles F. Stout, of Trenton, representing the agricultural committee of the Trenton Chamber of Commerce; Robert Wallace, of the Jersey City Chamber of Commerce, and John Burk, head of the Bureau of Weights and Measures, Jersey City. The markets in all of the municipalities visited were found to be conducted along the same general lines. It was found that Jersey City had given over with the sanction of the City Commission a portion of streets in three sections of the city for the use of the farmers.

Prize Pig Contests.—The largest and best local farm exhibit of the year was conducted during the week on a plot of ground in the rear of the high school in Princeton. There were eight entries of pigs for the exhibit. There was a first and second prize for the sow and litter contest, participated in by boys only. Four prizes were awarded in the fat contest, the first being $1, the second 75 cents, and the third 50 cents with ribbons. Six pigs were entered in this contest. Demonstrations were also given by the Mercer County Poultry team and by the Mercer County Calf Club Team. A demonstration was also given by a pig club member on the value of self-feeders. One of the most interesting features of the Mercer County club leader's work is the opening of the pig club records received from boys and girls in the contest. The youngest pig club member has one of the most interesting records. August 1, his pig weighed 146 pounds, and September 1 it weighed 220 pounds, having made a gain of 74 pounds during a period of one month. This gain was made at a cost of nine cents per pound.

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(My commission expires May 1, 1923.)

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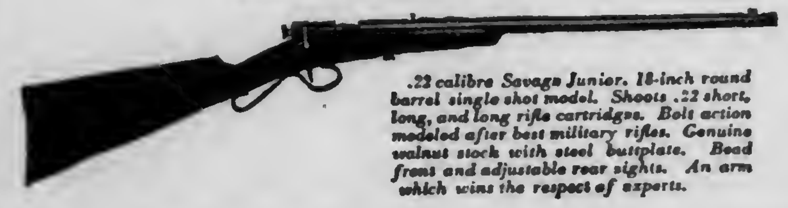

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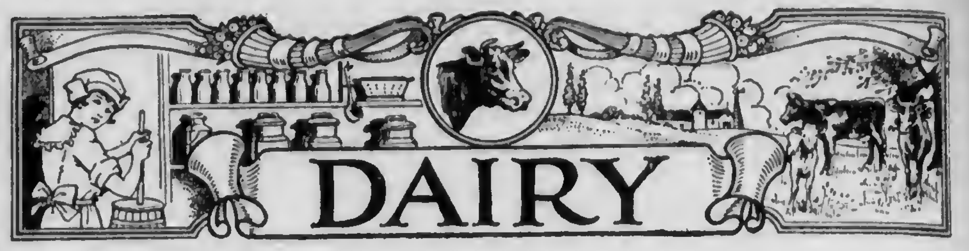

DAIRY

OHIO DAIRYMEN ACQUITTED

Dairy farmers, everywhere, will find great satisfaction in the news that after a full week's trial and consideration of evidence a Cleveland jury is convinced that the seven officers of the Ohio Farmers' Cooperative Milk Company are not guilty, and that the men who furnish Cleveland its daily supply of milk have not acted unlawfully in organizing for collective bargaining with the city milk distributors.

Those absolved from the charge of violating the anti-trust law are: H. W. Ingersoll, Elyria, president of the producers' organization; S. A. Hull, Perry, vice president; W. B. Richmond, Elyria, secretary-treasurer; Allen Mills, Auburn, Z. A. Kent, Mantau; S. W. Kelner, LaGrange, and J. A. Clark, Medina. The jury began its deliberationat 10.50 A. M., Thursday, September 19th and the verdict was agreed on at 7.30 in the evening. At Judge Powell's instructions it was sealed and delivered to him when court opened Friday morning. According to H. W. Hackenberg, foreman of the jury, four ballots were taken. The first two stood five for conviction and seven for acquittal. The third ballot showed eleven for acquittal and one for conviction. As required by law, the fourth ballot was unanimous for acquittal. The case, the first to be tried as a result of the four indictments returned by the special food jury, was on hearing five days.

The manner in which these well-known and responsible men were arrested and forced to spend a night in a filthy jail before they could obtain bondsmen is typical of the attitude of the average city prosecutor, who is attempting to grasp at technicalities to the end that he may build up a political following in his district. While under the law it is necessary to pay heed to technical violation, the public is more concerned in practical results than in the persecution of the producers who have been forced to stand together in order that they might protect their business from the control of vicious commercial and political groups that now control the sale and distribution of food products in our large cities. It has not been established that the milk producers by their present plan of collective bargaining have caused the retail price of milk to city consumers to advance. On the other hand there is plenty of evidence to indicate that these organizations have been a big factor in stabilizing the milk supply and preventing a serious advance in retail prices.

The distributors of milk and manufacturers of dairy products have gradually organized themselves into larger and larger groups for the purpose of eliminating unnecessary costs and enabling them to buy milk at lower prices. The consumers buy milk and other dairy products from distributors and manufacturers who are well organized for bargaining. The producer sells to the same well-organized distributors and manufacturers. Until the dairymen learned to unite their strength they were perpetually at the mercy of those who, wiser than they, had organized their resources and acted virtually as a unit in all negotiations.

Milk producers would be negligent of their own best interests, as well as out of touch with the trend of the times, were they to fail to organize in one way or another for collective bargaining purposes; were they to ignore the advantage that comes of group action in the selling of their milk and cream. There must, of course, be a strict obedience to laws, both technical and otherwise; but no one will quarrel with men who, finding themselves face to face with the necessity of doing business with a group expert at collective operations, take the natural step of organizing on their own account in self-defense.

A Modern Stable and Equipment

HELPING OUT THE PASTURE

A young farmer friend this season is piecing out his pastures in this way: One of the neighbors has more pasture than he can use. He offered to rent it to the young man at so much a week for the time actually used. The young farmer figured it out this way: "While my cows are feeding in the neighbor's pasture, my own pasture will have a chance to pick up. I may not get much more milk the week my cows are in the neighbor's pasture, but by keeping them a week at a time on the adjoining pasture, I can keep my own from failing as it otherwise would."

For the first few days the cows rather shrank on the strange pasture. They spent most of the time exploring the fields, but after the novelty of it wore off, they settled down to business and ate off the flush grass. The greatest advantage was where the farmer thought it would be; the respite in his own pasture gave time for it to improve. Especially in the weeks where we had showers the improvement was more marked. The point is, not to permit the cows to shrink.

This same young man has rented a small pasture that lies next to his farm, and this he uses as a night pasture, still further relieving the home day pasture. This might be done in a good many instances if we took pains to look around us for such opportunities. Where land cannot be rented, something may be done, by dividing the home pasture into different fields, one of which would be used for a few days at a time while the other is resting.

In all ways possible, and by all means, we must keep our cows from falling off in milk yield. A few weeks of poor pasture at the end of the season will cost a big slice out of the summer's profits.—E. L. V.

CATTLE SALES AT NATIONAL DAIRY SHOW

This year for the first time in the history of the National Dairy Show national cattle sales will be held in connection with the show in Chicago. The importance of the public sale of cattle as an educational factor in the progress of dairying thruout the United States impelled the Dairy Show management to authorize the holding of these sales in the same building and in connection with the show.

Two national cattle sales have been scheduled for National Dairy Show week—October 6 to 12—and are attracting wide attention thruout the country. The sales are the National Holstein Sale October 8 and 9 and the National Jersey Sale, October 9.

CORN SILAGE US. CORN-SOYBEAN SILAGE

(Continued from Page Two.)

when Group I was fed corn silage. In the second period taken for comparison, after the silage had been reversed, the balance in favor of Group I was maintained at about the same level. The totals of the average milk production per cow per week for this three weeks period were 573.05 pounds and 535.85 pounds respectively, for Groups I and II, a difference of 37.20 pounds of milk in favor of Group I.

Comparing the sum of the averages for milk production per cow per week, of Group I, during the first period taken for comparison, when this group was fed corn silage, with the sum of the averages for milk production per cow per week of Group I during the second period of comparison, when the group received corn-soybean silage, we find the totals for the first and second periods to be 599.08 pounds and 573.05 pounds respectively, showing a decrease of 4.34 percent when the change was made to corn-soybean silage.

A like comparison in the case of Group II shows that the yield of milk decreased from 557.92 pounds, during the corn-soybean silage period, to 535.85 pounds during the corn silage period, a decrease of 3.95 percent in milk production when the change was made from corn-soybean silage to corn silage.

It will be noted that the two kinds of silage were of practically equal value in their ability to maintain the milk flow.

A comparison of the decrease in milk and butter-fat production for both groups of cows, during the second period taken for comparison, is presented in tabular form below:

Average Production of 3rd, 4th and 5th weeks

Group I Lbs. Milk	Corn Silage Lbs. Fat	Group II Lbs. Milk	Corn—Soybean Silage Lbs. Fat
599.08	24.24	557.92	23.58

Average Production of 6th, 7th and 8th weeks

Group I Lbs. Milk	Corn—Soybean Silage Lbs. Fat	Group II Lbs. Milk	Corn Silage Lbs. Fat
573.05	22.88	535.85	20.56

Percent Decrease

4.34	5.60	3.95	12.80

Both groups showed a gain in average weight when receiving corn silage and a loss in average weight when receiving corn-soybean silage. The cows in Group I gained an average of 8 pounds each during the first preliminary period when receiving corn silage, and lost an average of 10 pounds each during the second period of comparison when receiving corn-soybean silage. Similarly, Group II lost an average per cow of 21 lbs. during the first period of comparison, while receiving corn-soybean silage, and gained an average of 11 pounds during the second period taken for comparison when receiving corn silage. This seems to indicate that corn silage is superior to corn-soybean silage in energy content in agreement with average energy values of the two kinds of silage as given in Pennsylvania Experiment Station Bulletin No. 143.

Conclusion

According to the results of this investigation corn-soybean silage maintained the production of butter-fat slightly better than did the straight corn silage, and was of practically equal value in maintaining the milk flow. This feeding test, however, should be supported by parallel results of similar feeding trials before any sweeping conclusions are drawn.

The more or less common practice of growing soybeans with corn and ensiling them together is, as a rule, advisable because it enables the farmer to secure an increase in yield of 1½ to 2 tons of succulent roughage per acre. Moreover, the fertility of the soil is improved by the added nitrogen and organic matter resulting from the growth of a leguminous crop.

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MASH

That's UBIKO BUTTERMILK EGG MASH. The cheapest mash you can buy considering the results. You get 19 per cent protein; 8 per cent ash—mostly bone phosphates (no crushed rock); 90 per cent digestibility—only 6 per cent fiber; wholesomeness—the lactic acid in the dried buttermilk aids digestion and prevents disease.

It would cost you considerably more than UBIKO'S price to try to make this mash yourself. And it would be impossible to get more than a *few* of the 9 ingredients in your feed store. UBIKO is modelled after the Pennsylvania Department of Agriculture formula and is ideal. Perfectly balanced. This mash makes eggs in plenty—try it and make your flock pay better.

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PREVENT BLOATING

Bloating is most commonly caused by eating wet clover. Other grasses seldom cause this ailment. Knowing the cause, it is comparatively easy to prevent attacks of this kind. Twice during the grazing season special care should be taken with the cattle. The first is immediately after the haying season, when the clover sprouts are very young and tender; the other, when cows are driven into the new grass fields for the first time.

Feed the cattle their short feed in the morning, together with a pinch of salt and a very small fork full of hay. Then be sure they drink before they leave the barn yard. If they must be driven thru the lane or along the road for a short distance, let them take an occasional bite of the grass growing there. Do not let them out too early in the morning if there is a heavy dew, and leave them in the new grass for short periods until they become accustomed to it. Few cows will bloat if these precautions are followed.

The last case of bloat in our barn happened more than thirty years ago. At the time no extra precautions were taken and one day one of the young cows was found bloated —dying we thought. We were no longer able to get her up or do any other thing with her. My father punctured her with his pocket knife and inserted a turkey quill into the incision. We had no proper instrument for the purpose and she would have been dead long before the arrival of a veterinarian. The operation was a success at once, and shortly thereafter the animal was eating as if nothing had been the matter with her.

Not all are so fortunate with their bloated cattle. I live on one of the main highways which leads to a fertilizer plant and many a time during the summer months the truck passes with several dead animals. The proprietor of the works says that several dozen carcasses are nothing unusual for them to receive during a week. He further said, "Sometimes we are out with the truck day and night for long stretches at a time." There are other ailments besides bloat, however, that cause such losses to farmers. Perhaps most of the losses of animals result from ignorance of prevention and cure. We farmers ought to wake up and do our utmost to stop this leak in our pocketbooks.—R. I. W., Lebanon Co., Pa.

THE NATIONAL DAIRY SHOW

The complete program for this year's big National Dairy Show, which will be held in Chicago from October 6th to 12th, has been made up. Something special will be doing each day of the show. A wealth of entertainment has been provided for all—men, women and children—while a vast display of exhibits by the United States Government and by commercial houses, contests, judging contests, cattle judging, national cattle sales, conventions, meetings, demonstrations, lectures, addresses, moving pictures, pageants receptions for the women, the big Horse Show every evening, band concerts and other things all combine to make the show just what its name implies —a National Dairy Show.

Every night from October 6th to 11th inclusive there will be a big parade of prize cattle in the immense show ring followed by the Horse Show. Every day there will be band concerts. Every day during the show the United States Government will give two performances of its big stage spectacle, "Milk Fairies," with 350 children in the cast. Every day there will be conferences of state leaders in domestic science, a domestic science school, demonstrations in infant welfare work and demonstrations of welfare work for school children. The list of contests is attractive. The inter-state cattle judging contest by boys and girls will be held on Monday, October 6th, also the students' cattle judging contest.

Wednesday, October 8th, will be "Southern Day" in honor of the very large number of visitors coming to the Dairy Show from Southern States. On Thursday and Friday, October 9th and 10th, Dr. E. V. McCollum of Johns Hopkins University, Baltimore, will be at the Dairy Show and will lecture on his wonderful discoveries about milk and the science of the newer nutrition.

TO INVESTIGATE MILK PRICES

The city government of Rochester, N. Y., has appropriated $10,000 that will be placed at the disposition of Dr. Chas. E. North of New York City, who is investigating the price and supply of milk in Rochester. This appropriation is expected to cover the first four months of the work, and it is expected that further appropriations will be made until something can be done to put the distribution of the city's milk supply on a more just and equitable basis.

SILAGE RELIEF FOR DAIRYMEN

Ascending prices are making the dairyman's winter feed problems more and more acute every day. The man with plenty of silage can enjoy untroubled dreams, for he knows that his cows are sure of the roughage part of their ration, and if necessary it will be possible to tide the herd over on silage along with a minimum amount of grain.

Legume hays have reached almost prohibitive prices, and there is no indication that the maximum has been reached. No relief can be found in substitutes for prices of other hays show the same upward trend. Straw and corn stover help some, but both lack palatability, and cows will not consume sufficient quantities of either to maintain a profitable milk flow. The only relief is the liberal use of silage, which safely stored in the silo is no longer subject to price fluctuations.

Experiments have proved that silage is the best and cheapest form in which a succulent feed can be provided for winter use. A given amount of corn in the form of silage will produce more mik than the same when shocked and dried. Good silage when properly fed is all consumed, and there is less waste in feeding silage than in feeding fodder. Where such heavy protein feeds as cottonseed meal are used, it is recommended that silage be fed liberally in the roughage part of the ration. Its succulence makes it palatable, and it has a beneficial effect on the digestive organs. Silage is the best roughage for dairy cows, not only under present extraordinary conditions, but at all times.—M. H. Fohrman, in Mo. Circular.

Often milking machines have been declared impracticable when the trouble was not with the machine but with the way it was cleaned—or rather not cleaned. During summer special care must be given these machines.

PREPARING HIDES AND SKINS FOR MARKET

The preparation of hides and skins for market is of great importance, as where they are not properly prepared and shipped they are subject to great deterioration. The farmer who has thoroly cured a number of hides and skins by the green salting method should place them over some elevated object to remain over night and drain free of excess moisture; after which the surplus salt should be removed. If the hides are handled in this manner, and thoroly cured before being shipped, the shrinkage should be relatively small. If the hides have been in salt, only a day or two before shipping, do not remove any of the salt.

Folding the Hides

As a rule hides are folded so that the hair side is cut. It is essential to fold in the head and neck on the body of the hide, flesh surfaces together, and to turn in the tail in a similar manner. Then a narrow fold on each side should be made by throwing back the body edges and legs upon the body of the hide, flesh surfaces together, keeping the lines of the folds parallel. The legs should be folded back and lapped with the hair surfaces together, bringing the break of each fold near the middle line of the back. The side folds should be completed by bringing together the two breaks of the folds, with the middle line of the back as the main fold. The butt end of the folded hide should then be thrown forward about four-fifths of the distance to the neck folds, whereupon the forward portion of the bottom lap should be folded back on top of the first fold, bringing the break of the rear fold even with that of the fold just made.

Each hide should be bundled separately and tied securely, about seven feet of strong cord being necessary to tie one hide bundle. A soft rope or line at least one-fourth inch thick is suitable for this purpose, altho regular hide rope is preferable. Wire should never be used. Fold calf skins the same as cattle hides. However calf skins may be placed together and tied into one bundle.

Sheep skins are bundled differently from either cattle hides or calf skins. The wool sides are laid down and the skins are folded along the median line of the back with the wool side out. As many as five skins folded in this manner can be placed in a single bundle for shipment. It is not advisable to pack more than this number in one bundle as the wool helps to generate heat very rapidly. Two pieces of stout rope should then be wound around the pack from back to belly, one passing around the back portion just in front of the hind legs and the other passing around the front portion immediately back of the fore legs.

Eliminate the slacker hen! She is a conscientious objector to anythink like work, but a star boarder when it comes to eating.

A touch of oil or vaseline at the hinged points of umbrella rods will prevent the rusting and breaking of the small wires that hold the ribs together.

A coat of shellac once in a while freshens and preserves linoleum.

There are few better dust cloths than those made of old lisle or silk stockings, especially if several are padded together.

How Much Power Are You Losing Between Engine and Drawbar?

YOUR power loss can be enormous if you slight lubrication. When your oil begins to run low or grease cups get dry, never take that "extra turn" around the field. Stop right there to "oil up", or you may pay dearly for the time you "think" you have gained. When bearings start to wear, their waste motion knocks them out in short order.

If you try to "save money" by using cheap oils and greases which go bad under high engine heat, your power loss and unnecessary wear will be many times greater than your false "saving".

It is a well known fact that the best lubricating oil today is made from Pennsylvania crude. Every ounce of Crew Levick oil is refined from Pennsylvania crude. There's a right type and quality for every use.

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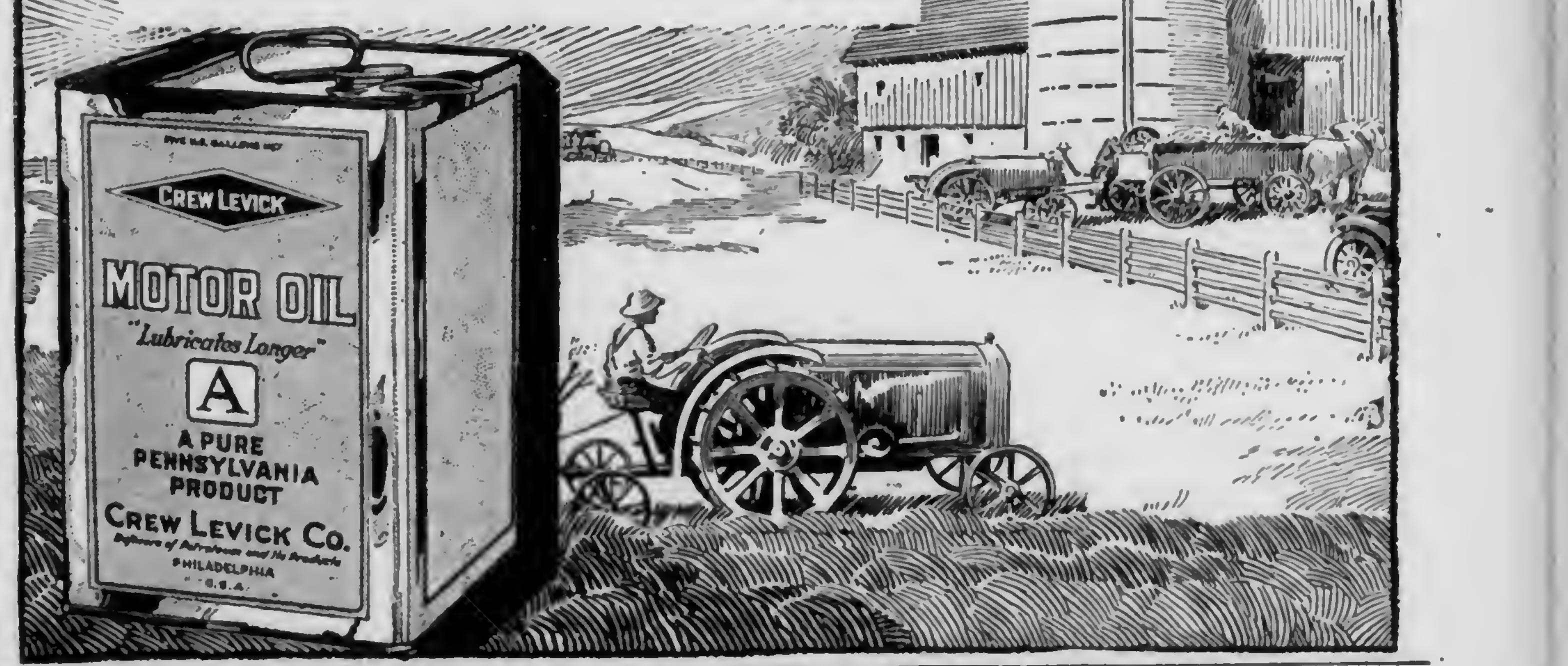

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Our illustrated catalog gives a lot of information. It tells how to take off and care for hides; how and when we pay the freight both ways; about our safe dyeing process on cow and horse hide, calf and other skins; about the fur goods and game trophies we sell, taxidermy, etc.
Then we have recently got out another we call our Fashion book, wholly devoted to fashion plates of muffs, neckwear and other fine fur garments, with prices; also fur garments remodeled and repaired.
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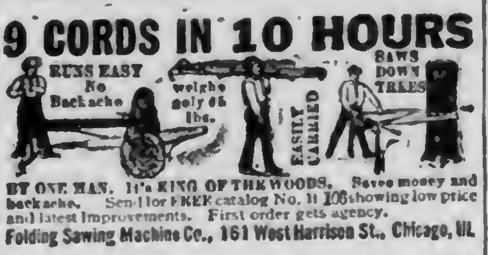
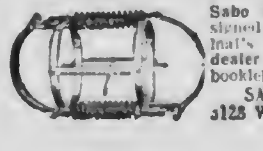


9 CORDS IN 10 HOURS
BY ONE MAN. It's KING OF THE WOODS. Saves money and backache. Send for FREE catalog No. H 106 showing low price and latest improvements. First order gets agency.
Folding Sawing Machine Co., 161 West Harrison St., Chicago, Ill.

TRAPPERS! Furs are high; trapping pays. New illus. book tells how to trap fox, muskrat, skunk wolf, mink, etc.; water den, snow, log blind sets etc. how to fasten traps, stretch furs, make dead falls, snares. Fur News, big illus. magazine, tells about fur markets, trapping, hunting, woodcraft, fishing, fur farming, roots, herbs; lots of good stories. Send 10c coin for copy of book and sample copy of magazine.
FUR NEWS, 71 W. 23rd. St, Room 412 New York

Concerning Raw Furs
Blustein needs quick shipments this season. He'll pay the highest prices that were ever known in the Raw Fur industry. The wonderful Blustein guarantee has always stood for the most money, the quickest money and the surest money, but this season Blustein will surprise you. When you ship to Blustein this season you'll know you're getting some real money. Blustein charges no commissions, allows the most liberal gradings and does business with shippers on the profit sharing idea that's why Blustein gets the Furs.
How about yours? Send for Blustein's New Price list—quick. The quick shipments get the big money this season. Take it from Blustein
David Blustein & Bro., 188 West 27th St., New York—the center of the world's fur industry.

Strawberry Plants For Fall planting. Runner and pot grown plants that will bear fruit next Summer. Also RASPBERRY, BLACKBERRY, DEWBERRY, GOOSEBERRY, CURRANT, ASPARAGUS, RHUBARB PLANTS; FRUIT TREES, SHRUBS. Catalog Free.
HARRY A. SQUIRES, GOOD GROUND, N. Y.



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3128 W. 25th St., Cleveland, Ohio

A GREAT COLLECTION OF NEW MERCHANDISE

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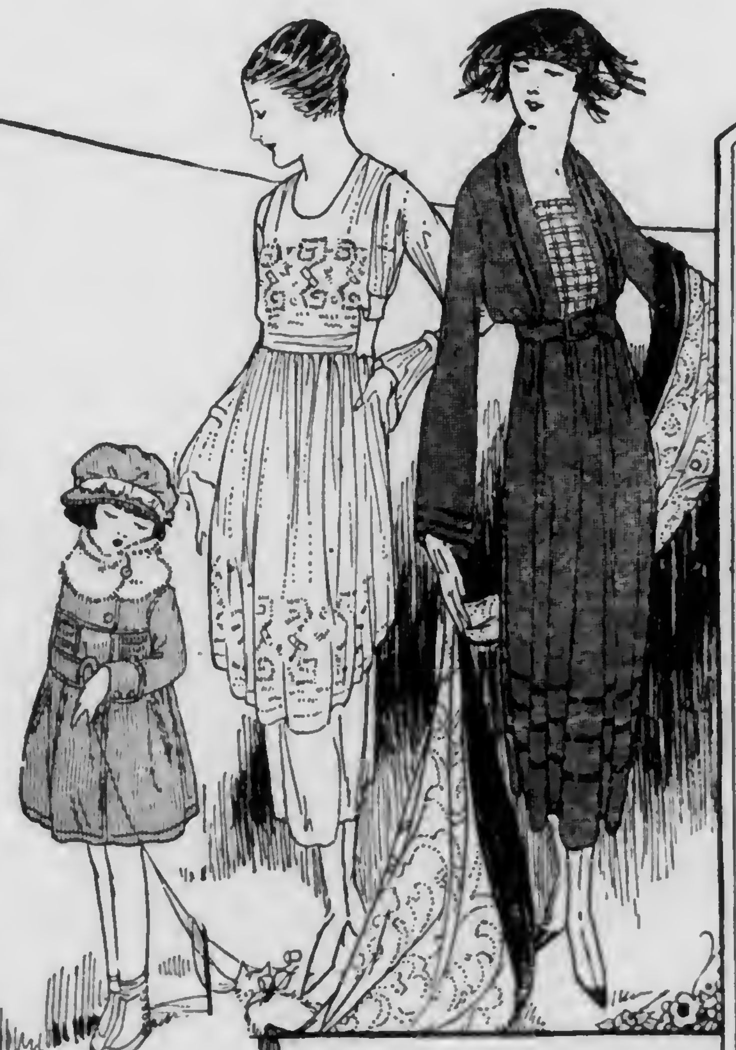


New York's newest Fall Dresses

Just when women's and young girls' dresses have reached a price level that is almost prohibitive, The Charles William Stores announces a wide selection at really amazing prices.

Bought just on the eve of the last big advance, selected in the world's fashion center, these charming models fill 22 pages of the New Fall Catalog.

The model on the left, in silk georgette Crepe and lustrous satin, elaborately embroidered, in Copenhagen, navy blue or taupe, at only $23.98, and this French serge, navy blue, wine or green, smartly braided, with embroidered vest at $10.98, give an idea of the smartness and wonderful values of the whole selection.

85 different models to choose from!

And prices from $4.59 to $27.98.

You will want to turn first to pages 75 to 96 in your new Bargain Book.

Bargains in Children's Clothes

Dozens of styles in children's coats and dresses. Coats of corduroy, chinchilla, cheviot, plaid mixture, and other materials, from $3.98 to $16.98. The child's coat shown here is soft all wool jersey with beaver plush collar, at $13.98.

See pages 67-71, 109-113, and 196-201.

Waists and Skirts

10 pages of waists—voile, georgette, crepe de Chine, taffeta, poplin, lawn, soisette, linene, silk—from 98c to $14.98. The crepe de Chine waist shown here is $4.39. Pages 97-107 will fix you with smart waists for all winter, at a fraction of what you expected to spend.

This skirt of all wool chiffon Panama is $8.50. For other splendid values turn to pages 62-65, 72-74, 267.

Everything your baby needs

From a 9c French ivory rattle to a 60-piece layette at $16.98. This warm sacque at 59c and delicate Val trimmed dress at 98c show the kind of values you will find for your baby on pages 187-196

An a ent —when thi o scarce

In the face of an uncertain market The Charles William honestly claim a real achievement in the remarkable collection of merchandise this Fall.

So resourceful, so have our expert buyers been, that day big stocks—splendid stocks—in of the forty-seven Charles William Stores.

It is the long e Charles William experts, their knowl rkets and sources, their very friendship rade, that make it possible to offer you ook full of splendid stocks.

The new catalog is e press—your copy should reach you hen you turn its pages, you will rea e Charles William Stores takes such p merchandise, in the wide range of selecti greater values they offer when goods are so scarce.

Bargains for Women

Smart wool mixed Thibet coat	$ 9.79
All wool polo velour coat	24.98
Girls' 3-piece, rainy day outfit, coat, cap and schoolbag	3.89
Wool mixed serge suit, smartly tailored, plush collar	13.48
Natural fox scarf, silk lined	17.49
Genuine grained leather handbag	.98
Wide, straight brim hat of fancy woven cloth. Velvet rose at side	1.98
Pretty checked gingham house dress, plain chambray collar and vestee in harmonizing color	1.98
Nainsook nightgown, hemstitched in pink, an unusual bargain	.98
White coutil corset, medium bust, long hips, 4 hose supporters	1.29
Girls' fleece lined union suit	.98
Silk lisle stockings—3 pairs	1.00
Maynard kitchen range — high closet —6 lids	32.95

Look in your Charles William Stores catalog for hundreds of other things you will want.

This year's Men's Clothes, at other years' prices

An especially noticeable achievement is our wonderful stock of all wool suits and overcoats. These were secured when wool was said to be practically impossible to get. They are of splendid quality, and at prices you had not dared hope for this season.

One of the season's most popular models is this fine all wool cheviot suit, at $23.75. This handsome ulsterette in olive green all wool cheviot is only $19.98.

There are styles to suit every build and every taste. It will be well worth your while to go carefully over every page from 344 to 366 in our Catalog.

Complete Outfitters to Boys

Not a need of your boy, from 2 to 19 years, has been overlooked. Go carefully over pages 341-343, and pages 370-384 in our Fall and Winter Catalog.

Illustrated is a fine value in wool mixed cheviot, popular skirt model, at $10.75.

Bargains for Men

Dress shirt of striped Percale	$ .98
Heavy-weight ulster, wool-mixed, astrakhan cloth collar	11.98
Serviceable navy-blue, wool-mixed serge suit	12.50
Handsome all wool serge suit, first-class tailoring	16.98
Gray flannelette work shirt	1.09
Flannelette pajamas, striped	1.89
Fleece-lined union suit	1.98
Warm heavy wool-mixed socks, white heel and toe ... six pairs	1.50
Motor or driving gauntlets of capeskin, 6-inch cuff	1.79
Durable schoolboy's suit, wool-mixed cheviot	7.50
Olympic boy's bicycle, reinforced steel tubing	23.75
Maynard gasoline engine with batteries 1½ H.P.	45.00
Richland light buggy harness, high-grade tanned stock	17.00

Many more splendid values like these and complete lines of all merchandise in the Charles William Stores catalog!

Rough Weather Clothes

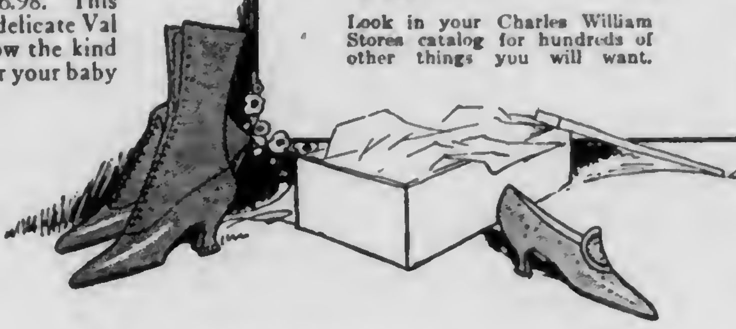
Stormcoats, mackinaws, huntingcoats, sheepskinlinedcoats and ulsters—made throughout for strength and protection—blanket, sheepskin and leather lined. A remarkably fine collection of sport and rough weather clothes. Priced from $2.98 for a brown duck coat with blanket lining to $35.50 for a genuine gabardine-lined leather coat.

Here is one of our excellent mackinaw values, in blue, red and brown plaid, all wool at $10.98. See how warmly the collar can be turned up around the neck.

Big values in rough weather clothes are shown in the catalog—pages 11, 361. 385-391, 565.

The Supreme Kitchen Cabinet

All steel, covered with pure white enamel. Improves the appearance of your kitchen 100 per cent., by providing a place for every utensil, and saves innumerable steps. A big value at $49.85. One handy model is only $11.65. See pages 802-805.



A 40% advance predicted for Shoes

The world-wide shortage in leather is about to force another big advance in the price of shoes.

Don't postpone getting your winter shoes—select them from the big assortment shown on pages 10 and 290-312 of the Bargain Book. Secure them now and save just about half what the same shoes will cost you later on.

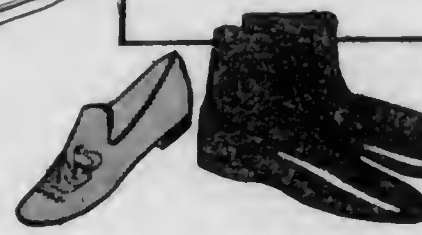
The shoe pictured is black kidskin, with graceful Louis heel, and priced at $7.95; it is one of our best values. And this smartest of pumps, in patent leather is only $4.39.

The wise buyer will pu Fur t now

Our furniture specialist has secured some of the most remarkable val in beauty of woods, in finish and de sign, we believe you will be able find anywhere. He advises th prices are expected to advance a soon, and that the wise buyer shou purchase at once.

rocker in imitation leather is only $18.85. (See This Queen Anne period $28.65, is of beautiful quar The finely designed din chair in walnut or mahog genuine Spanish leather $6.35.

On pages 778-840 of your Barga Book (62 pages devoted to furnit alone) you will find furniture every use, in a variety of styles prices that will please the "choosie housewife. a (shown above) is only the biggest phonograph values ever offered. The reductions 622 and 623 will amaze you. is usually priced at $125 now $85.



Men's Shoes

When you go over pages 10 and 316-334, the prices look actually like misprints. $2.39 to $8.89. The model above is mahogany tan, with rubber heels, $4.95. The gray felt slipper is $1.19.

Famous Shotgun

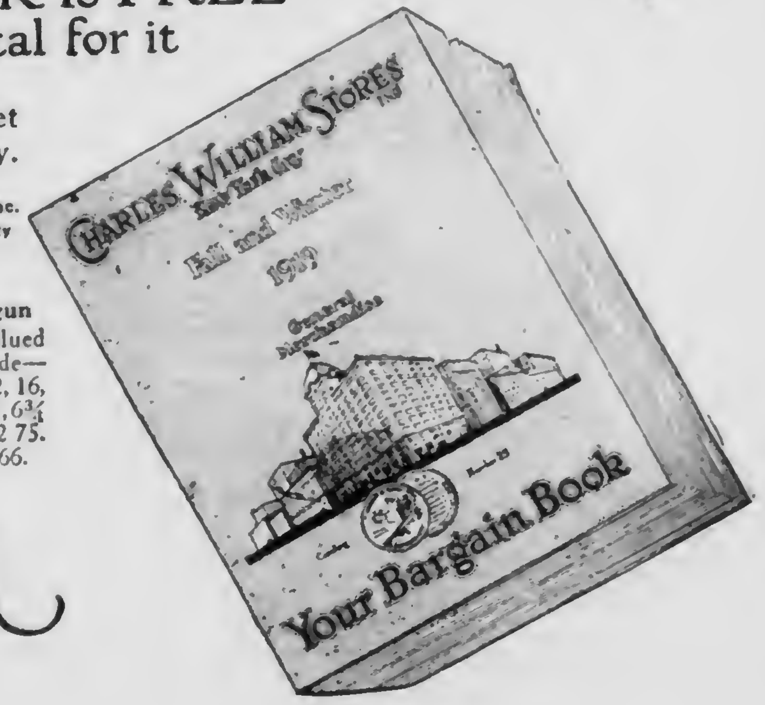
Genuine Army Blued Steel—safety slide—walnut stock, 12, 16, 20 gauge; weight, 6¾ to 8lbs.—only $22 75. See pages 551-566.

This book is FREE
Send a postal for it

if you have not yet received your copy.

Address

The Charles William Stores, Inc.
515 Stores Bldg., New York City



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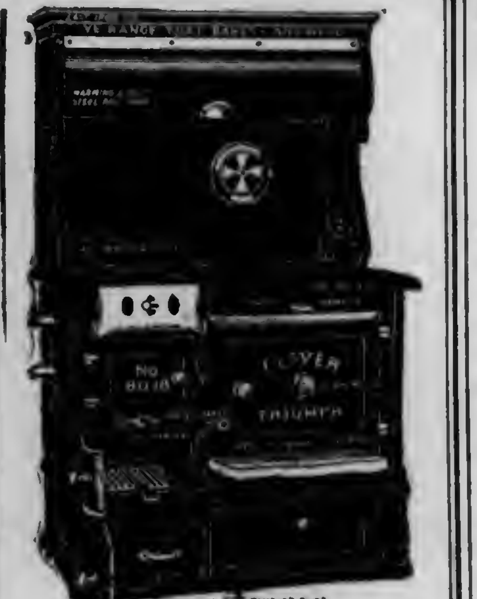

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Range will meet all the requirements of the "Pennsylvania Farmer" satisfactorily.

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The wonderful new Ro-San product for homes without plumbing. Nothing like it anywhere. Equal in comfort, style and quality to our famous Indoor Toilet and Washstand. Full size metal tub, white enameled. Simple heater and 12 gallon nickeled water tank. Water heats quickly. A boon if you have sickness or need hot water quick, day or night. Use gas, gasoline or kerosene. No plumbing or extras. After use tub closes up against frame, less than 3 feet square. Covers heater. Rolls anywhere easily. Keep in small closet. Bathe in comfort—as often as you like—anywhere in the house. Write today for particulars and price.
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261 South Third Street, Philadelphia, Pa.

HOUSEHOLD

FARM HOUSEKEEPERS' REWARDS

My neighbor just phoned me to say that she had heard me say that our carrots did not come well this year, and that she had a quantity of fine ones just in their prime, and that I could have all I wanted to can from their patch.

"Send up your boy and get all you can use now and plenty to can for next winter," she urged.

She went on to say that they (she is one of the rare and lucky ones who keeps a girl to help her) had canned a bushel of grapes that day besides doing the week's washing. And that after pulping the grapes they had 13 quarts of rich fruit and some bottled grape juice. Besides they had canned 10 quarts of tomatoes.

She further said, "We opened today a can of that beef tongue which we put up last winter, and it was delicious. I put up two cans of tongue and one of heart, and this was the first one that we have opened. I did not know it could taste so good. Seems as if it tastes better than in winter when we were having so many other kinds of meat."

This neighbor cans great quantities of all kinds of fruits, vegetables and meats with almost unvarying success, and finds it a great convenience in feeding her family as well as a good source of economy. It enables her to maintain a well balanced diet for her family thruout the winter. Last week she canned two bushels of lovely Niagara peaches direct from the Orleans County orchards at $2 a bushel. A little before that she canned two big baskets of nice plums from the same fruit growing county at prices far below what they were selling for in our local markets.

She had had several sessions of canning her own home-grown tomatoes, beets, carrots, and a lot of peas early in the summer. She has made a quantity of crabapple jelly. And a few days ago she canned 21 quarts of the finest looking cans of corn that I ever saw; and before that she had canned 10 or 12 quarts.

"We cannot begin to eat all our good things of the garden, orchard and field as they come on, so why not can them for winter eating? Father just came in and reported that there are two rows of fine late peas ready to be picked out near the corn field, but really I don't see where we can use them, there are so many other things."

And I know she had a lot of fruit and vegetables left over in her cellar from last year's canning, delicious all. But somebody may need them this coming winter, she reasons, so she goes on canning. She is a most generous soul. And since the apple crop is a failure with us here this year, it is well that she has these left-over additions to her winter supply, for they have a big family of hired help and company on that farm that will make excellent use of it all, no doubt.

Getting Fruits by Auto Truck

You will note that the peaches, plums and grapes were not home-grown, but secured direct from the growers at close to wholesale prices plus a small charge for express. The auto truck now enables many a farmer's wife and city housekeeper to go to the growers and get these things fresh and in their prime, and to get just what they select and pay for. (Editor's Note.—A friend of your editor's, who does canning, jellying and pickling for a private city trade, is quite apt to go to the orchards or to the markets and make her selections personally, then ride out home on the truck along with her goods; and thus make sure that there is no substitution or delay.) In our territory this year the big motor trucks are bringing fruits direct from the growers and selling it on street corners at much lower prices than the dealers ask. This has been a godsend to the city housekeepers, and we country housekeepers have also made good use of this source of supply to get things that we did not raise. We hope that this is a service that will continue to serve us as well as the growers every year hereafter.

The addresses of growers are obtained thru friends very often, and very often thru the farm bureaus of the counties where the products are grown. And sometimes the local papers carry advertisements of local growers, and growers from more distant points advertise in the farm papers. They should do so much more than they do, not only to serve themselves better but the better to let us farm folks know where to get the things we do not have.

And now isn't this plentiful supply of excellent foods that grow on our York state farms a fine reward? Good gardens and orchards are a great blessing, and I for one am glad that I live on a farm and in a section where they are available.—Mrs. M. G. Feint, Broome C., N. Y.

MUSTARD PICKLE

1 quart cucumbers.
1 quart small onions.
1 quart green tomatoes.
1 quart cauliflower.
2 red peppers.

Slice small pickling cucumbers and soak 2 or 3 hours in salt water, using ½ cup salt to 2 quarts of water. Scald the onions and the sliced tomatoes in salt water. Put all in a crock, cover wih hot vinegar and let stand 2 or 3 days. Then drain thoroly. Cover with the following dressing:

½ pound best ground mustard.
1 pint vinegar.
1½ cups light brown sugar.
½ cup flour (scant.)

Mix together the sugar, mustard and flour. Add the vinegar and bring to boil, stirring constantly to prevent lumping or burning. Let boil to thoroly cook the flour. Pour over the pickles while hot.

If the onions are a bit large, they may be cut in halves.—Pearl MacDonald.

A ONE-BURNER OVEN

My wife does her cooking on a three-burner oil stove. It is one of those kitchen equipments that would be on a good many farms if the farmer and his wife only knew what a saving of energy, time and fuel they give. Then we got a little one-burner oven some days ago. Usually the oil stoves use a two burner oven all the time. This one burner oven saves space on the stove as it does not take up half as much space as the two burner.

Now here are the advantages: It heats up more than twice as quickly as the larger ones. That means less wasted fuel and it also means a cooler kitchen for the cook. The one burner holds two pies or two tins of biscuits. It will handle a fair sized cake easily. In strawberry seasons the quickness and handiness of this oven means a shortcake in a hurry and without bothering the rest of the dinner.

This little oven is just another one of those handy savers of time and energy for the housewife that a lot of farmers would have if they knew about it or thought of it. Kitchen conveniences pay big interest on the amount invested. Keep watch for more of them.—E. R., O.

DIRECTIONS WANTED

A reader asks that some one send directions for crocheting the letter "G" about three inches square. Also, a yoke with sleeves for a child about a year old.

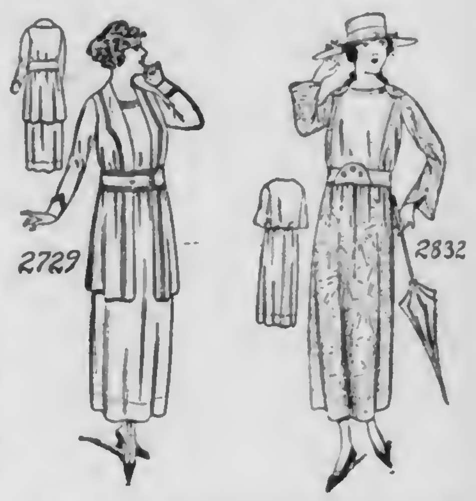
Putting in a supply of butter for next season? A copy of Extension Bulletin 33 on "Making and Storing Butter for Home Use" is yours on request from the State College at Ithaca, N. Y.

With many exclusive stores advertising rag rugs, the housewife who has discontinued the good old-fashioned practice of cutting carpet rags may again adopt this spare-time job of her grandmother.

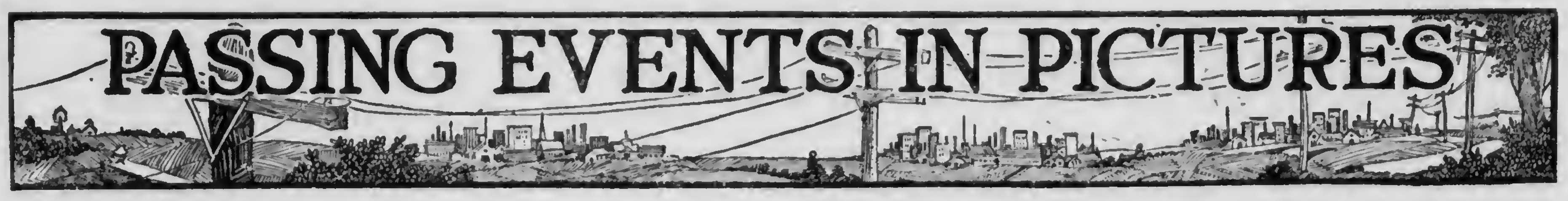
PENNSYLVANIA FARMER PATTERNS

Give figures and letters of each pattern exactly as printed at beginning of each description or we will not be responsible for correct filling of orders. Give bust measure when ordering waist patterns, waist measure for skirt, and age for children's patterns. Address Pennsylvania Farmer, 261 S. Third Street, Philadelphia, Pa.

2729.—This design will lend itself effectively to combinations of materials. The pattern comes cut in 7 sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. Size 38 will require 6 yards of 44-inch material. Width of skirt at lower edge is about 1⅞ yards. Pattern, 10 cts.



2832.—A Novel Gown.—Very attractive for combinations of figured and plain foulard, for crepe and satin, plain and checked gingham, gabardine and georgette, or silk and georgette. The sleeve may be in wrist or elbow finish. The jumper portions may be tucked up over the belt or worn loose over the skirt. The pattern comes in 3 sizes: 16, 18 and 20 years. Size 18 requires 3¾ yards of 40-inch material for the dress and 1¼ yards for the jumper. Width of skirt at lower edge, is about 1⅝ yards. Pattern, 10 cents.



PASSING EVENTS IN PICTURES

(Photos, Copyright by Underwood & Underwood)

1.—Passenger Airplane, Carrying 9 Persons, Wrecked at Syracuse, N. Y.

2.—The "Big Three" League Opponents—McCormick, Borah and Johnson.

3.—Three Grandchildren of Theodore Roosevelt.

4.—The Gun That Fired the First Shot in the War, October 23, 1917.

5.—General John J. Pershing, Taken Upon His Return to America.

6.—Senator Edge of New Jersey.

7.—President Wilson and the Governors at the Recent Conference in Washington.

8.—Women Buying at a Washington Curbstone Market.

9.—Castle Doorn in Holland, the Present Home of the Kaiser.

10.—Secretary Daniels and Wife at Drydock Opening.

11.—A Boy and a Gorilla Playing in the Zoo.

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Your taste apparatus certainly cannot be fooled! So, when you smoke Prince Albert and get a lot of delight *you know* you've got the big first prize on the end of your line!

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No matter what your past luck has been on pipe smokes you put your confidence in Prince Albert for it certainly makes good every time the clock ticks.

Toppy red bags, tidy red tins, handsome pound and half pound tin humidors—and—that classy, practical pound crystal glass humidor with sponge moistener top that keeps the tobacco in such perfect condition.

R. J. Reynolds Tobacco Company, Winston-Salem, N. C.

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Some ready for light service. Price right.
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GROWING FEATHERS QUICKLY

Chicks that feather quickly are preferable in the commercial poultry business. When the young birds have developed a good coat of feathers they are in less danger from chilling in the wind and rain. The late hatched chicks especially need a quick feather growth and they are the birds that are sometimes the slowest in growing them.

Among the feeds to promote rapid feather growth are sour milk and oats. We have found that chicks that have access to plenty of sour milk seem to feather the best. If some of the chicks show a lack of interest in the milk, they can be made to eat more of it by using it in a wet mash. Oats seem to have a good influence and we use dry rolled oats as a starter When the chicks are nearly feathered they will be able to eat some boiled oats and as they develop it sometimes pays to feed boiled oats on the range in galvanized pails so the birds will eat their fill and obtain a good crop capacity and plenty of feather food.

Ground oats in the dry mash are good for the young growing stock, especially the late hatched birds which must receive all they can eat to develop plenty of frame and feathers before the cold winter nights. It is best to mark birds that feather slowly and not use them for breeding stock. We have had several Barred Rocks that developed feathers so slowly that they were nearly naked after reaching a pound in weight. Later, they developed a good coat of plumage and fine barring and there was a temptation to use them as breeders. But what would be the result? Next year the young might have the same fault of slow feathering and trying to raise such birds at a profit is very discouraging and unsatisfactory. One of the important factors in profitable poultry production is vigor and we cannot obtain it by breeding from these slow feathering birds that are easily chilled and stunted.

The feathering of the old birds at moulting time also has some influence on their vigor and laying powers during the second year. Sunflower seed in the ration seems to be good feather food. Plenty of green food and a well balanced mash should be supplied to the hens so that when they do moult the process will not be delayed. An abundance of sour milk will be useful at that time. On some farms there is a tendency to feed the birds well until late in the fall when they cease laying and begin to moult. Then they are neglected and the best care is lavished on the young stock. Often the old hens are allowed to shift for themselves with the idea that they will obtain enough grain from the fields to keep them thrifty until the snow comes. Sometimes such hens do not obtain enough nourishment to keep their bodies in good condition and grow a new coat of feathers at the same time. Then they go into the winter rather weak and they are in greater danger from roup and tuberculosis than strong well fed fowls. We do not believe in trying to force fowls to moult but think that should be left to nature. However, we think that nature can be helped in the process if the birds are given good care and plenty of healthful feed. Of course not many hens will ever lay an egg during the moulting period but they are getting ready for the season ahead and the hatching eggs to be laid during the next spring. It is the poultryman's business to properly prepare such stock for their work ahead.—K.

WINTERING OF BEES

September is the month when bee men must begin to think about wintering their colonies. The bees may be wintered either by insulating in good packing cases having heavy packing on all sides or by placing them in the cellar.

For the packing case method, the New York State College bee men advocate the use of cases holding four colonies. Each case should provide four inches of insulation on the bottom, eight inches on the sides and one foot on the top of the hives. This insulation should be given the latter part of September or the first half of October.

Cellar Wintering Hints

Cellar wintering is strongly urged for middle and northern New York. The bees should be put in the cellar before they have lost part of their vitality by hard freezing, which means not later than the first half of November. The cellar used should always be below the frost line and the temperature never below 40 degrees F. even in the coldest weather. Ideal temperatures are between 45 degrees F. and 52 degrees F. Sudden changes in temperature are to be avoided. The cellar must be dark; little ventilation is needed.

Leave Hive Entrances Open

The summer entrances to the hives may usually be left open, and in no case should the bees be confined to the hives by screen, as is sometimes done. After putting the bees in the cellar they should be left absolutely without disturbance until spring. From the first of April to the middle of April is usualy a good time to take bees out of the cellar.

FRENCH FARMERS WANT RABBITS

A French peasant told a Red Cross reconstruction worker that one of the three animals needed most to restock his farm was the rabbit. Chickens, rabbits and a cow or two—these were the most important features of the farm in the Frenchman's point of view.

American Red Cross representatives in their work of helping the peasants restore their farms to a productive basis are amazed at the regard in which the farmers of Italy and France hold the rabbit. In Italy the decrease in alfalfa and clover caused a great depletion of rabbits, and during the war they were killed off in great numbers for food.

In the States rabbit breeding is a hobby of many of our farmers, but it has never reached the dignity of an important industry. As pets the little animals rank high in children's favor, but in Italy and France they are popular solely by virtue of their edibility. Belgian hares are famous in France.

HOW TO GET MOST OUT OF PELTS

The weather is usually mild before November 15th, and very often so during December, therefore skins freshly taken from the carcass, especially skunk skins, should have all excess fat scraped off, bone removed from tails, skins placed on well shaped boards, fur side in, stretched taut and nailed, so that every part of the skin will dry.

The inexperienced trapper ships lots of green fur in mild weather, with the inevitable result that the dealer receives such lots in bad condition. Skins are tainted, partly damaged, or in most cases wholly rotten.

Green skunk and raccoon may be shipped in wooden boxes by express promptly after skinning, but only in cold weather. Green skins must never lay in mild weather or for any length of time in cold weather. If the weather be mild the fur will taint or rot, depending on the length of time the skin is neglected. Even in cold weather the skin will taint in a short period. When the skin taints or becomes rotten the fur will slough or slip off and it becomes worthless.

While complaints may arise because some houses do not pay quotations or grade unfairly, if trappers will learn how to properly handle furs, fewer complaints will arise since many damaged and worthless skins are shipped every season by trappers who are not aware of the condition, or know the value. hence complaint of unfair dealings when they get returns from reliable houses. Trappers should also be instructed not to trap out of season. They ship many skins that are trashy and worthless expecting good prices. This is also a reason why they complain of returns.—Donald Benjamin.—New York.

AUGUST EXPORTS SHOW INCREASE

The decline in our export trade indicated by the July figures did not continue in August, according to a statement just issued by the Bureau of Foreign and Domestic Commerce of the Department of Commerce.

Exports during August amounted to $76,000,000 more than in July, being valued at $646,000,000. In August last year the total was $527,000,000. For the eight months ended with August exports were valued at $5,275,000,000, against $4,009,000,000 in 1918.

August imports amounted to $308,000,000, a decrease of $35,000,000 as compared with July, but a gain over the $273,000,000 recorded in 1918. For the eight months ended with August imports increased from $2,061,000,000 in 1918 to $2,263,000,000 in 1919.

LATE POTATO CROP BELOW LAST YEAR

The late commercial potato crop now for the first time receives a separate report by the Bureau of Crop Estimates, United States Department of Agriculture. For the date of September 1, the condition of this crop indicates a yield of 123,518 carloads, or considerably below the estimate for the same month last year, 146,048 carloads. Late potatoes raised for local supply and all other late potatoes not entering distribution by carloads are not included in these estimates. One carload equals 700 bushels.

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	Days	Corn	Meat Meal	Wheat Middlings	Weight
No. 1	218	442 lbs.	33 lbs.	31 lbs.	296 lbs.
No. 2	156	148 lbs.	9 lbs.	14 lbs.	299 lbs.
Gain or Saving	62	294 lbs.	24 lbs.	17 lbs.	3 lbs.

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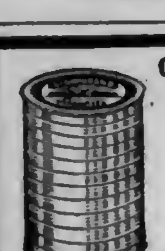

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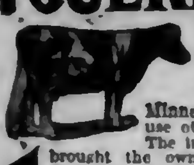

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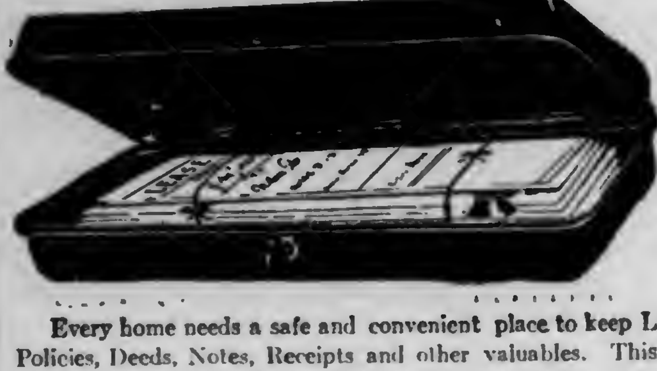

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PENNSYLVANIA FARMER, 261 South Third Street, Philadelphia, Pa.

METHODS OF SUCCESSFUL FLOCK—HUSBANDRY

Too often a flock of sheep is neglected after shearing time, or the latter part of summer. They are generally left to themselves in some large field the rest of the season and scarcely any attention given them. There are a few details which should not be overlooked at this time, that will add greatly to their thrift and well being.

Better results can be obtained by limiting them to a small acreage instead of allowing the flock the run of a very large field or pasture. As they like a change, the pasture can be better maintained by arranging it into fields of fair size. In large pastures it is their habit to graze in certain places which they will eat very close, and neglect the rest. It is advisable to keep the rams separate from the main flock during the summer.

When flies torment the sheep a great deal, it is of great benefit to apply a coat of pine tar to their nostrils, thus helping to ward off the gadfly which causes grub in the head, and the tar is also beneficial for sheep that have catarrh. Dip a stick that has been wound with cloth and dipped in the tar, and apply to the nostrils.

Always have places in the pasture during the latter part of summer where the sheep can obtain salt and sulphur at any time, as they are less liable to contract colds from eating much sulphur at this time of the year than in the spring. Ordinary coarse salt is generally preferred, and the sulphur can be mixed with it until it is of a yellowish tinge.

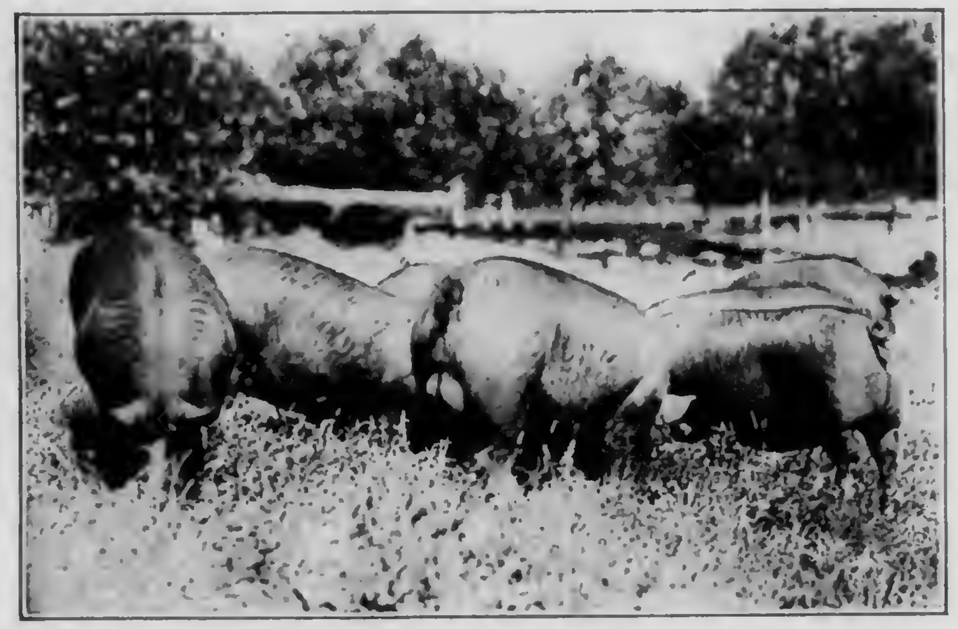
Good running water in the lot, is one of the essentials. It is not advisable at any time to allow horses or colts to run with the sheep as they run about to such an extent that often the sheep get injured. Swine can be kept in the same field to much better advantage.

During the burning heat of noonday, it is always noted that sheep are inclined to lie down in the shade and chew their cud. They graze mostly in the morning and early evening. Therefore it is important that plenty of good shade is available.

Fresh, untainted ground, free from any infection should be given the lambs to forage on, as where permanent pastures are used, there is danger from the stomach worm. The eggs, left on the ground by infected animals incubate and the young worms are taken up by the lambs, when grazing. Fortunately, this is seldom troublesome to the older sheep.

If the ground has been infected, do not allow the lambs to run on it until it has been under cultivation. Many flock owners are finding it profitable to provide green grazing crops. One piece of land sown to rye will furnish fall and spring pasture, and can be reseeded to furnish oats and peas afterward, or a fall crop of rape, which cannot be excelled, for green crops.

The English way of setting light hurdles to confine the flock to a small area until it is closely eaten, is being adopted by many sheep farmers. These hurdles are advanced as soon as the confined area has been cleaned, and narrow openings made to allow the lambs to run ahead of the ewes and forage on the new ground. Where it is desired to fatten the lambs quickly, it is a good plan to feed grain here in the hurdled space.



Porkers Making Good Use of Good Pastures

When rape is seeded on well prepared rich soil, it does well drilled in rows 30 inches apart on a flat at the rate of 2 pounds per acre, and there is less waste than when sown broad cast. It should be cut about 4 inches from the ground when a cut crop of it is wanted for feeding. Then it will make a good growth for the second crop. Give it sparingly at first to the sheep when coming from other pastures until they are accustomed to it. Vetch, cabbage and alfalfa are good for feeding sheep.

Lambs that are to be fattened in winter can be kept doing well on rape and clover until winter, with good hay and grain furnished as the season advances, thus getting accustomed to the feeds in their winter quarters when taken there. If one keeps ram lambs to be sold as lambs, or carried into yearling form, it is well to grain them thru the fall to secure full development, otherwise they are poor sellers.

A suitable grain mixture for lambs is made by mixing wheat bran four parts; whole oats two parts; finely ground corn meal two parts, and oil meal one part. In warm weather reduce the corn meal and increase the oat proportion.—Counry Contributor.

Markets

PHILADELPHIA PRODUCE

Philadelphia, Pa., Sept. 29, 1919.

As was reported in these columns last week, the supplies of nearby fruits and vegetables continue to decrease and Philadelphia is compelled to look more to distant points for supplies sufficient to meet requirements. Today, there were 22 cars of apples, 3 cars of pears, 2 cars of plums, 2 cars of lemons, 3 cars of peaches, 37 cars of grapes, 7 cars of quinces, 1 car of carrots, 14 cars of cantaloupes, 2 cars of cucumbers, 2 cars of white potatoes, 7 cars of sweet potatoes, 4 cars of cauliflower, 4 cars of lettuce, 6 cars of onions, 3 cars of tomatoes, and 8 mixed cars of fruit and vegetables from various outside and distant points offered at the market house depot, 30th and Chestnut streets. In addition to this there were 31 cars of potatoes, 26 cars of cabbage and 4 cars of onions at the Reading delivery yards, Second and Master Streets, and about 15 cars of potatoes in the Pennsylvania yards at 31st and Chestnut Streets. Also, there were about 63 cars of oranges, grapes, pears, plums, peaches, apples and grape fruit sold at the auction sales.

Vegetables

New Jersey and Pennsylvania continue to supply the great bulk of the potatoes. New Jersey Giants in 150-lb. sacks are selling mostly at $3.50 per sack for the No. 1 stock, with No. 2's at $2.40@2.50. The round stock such as Cobblers and Green Mountains are selling at $4@4.25 per 150-lb. sack. Practically all of the Pennsylvania potatoes are shipped in bulk, and these are selling mostly at $2.75@2.80 per cwt., with some very fancy Chester County potatoes bringing up to $2.90 per cwt. The potatoes hauled in by the nearby New Jersey farmers are selling generally at 90c@$1 per basket, while those hauled in by the nearby Pennsylvania farmers being of better quality bring from $1@1.15 per ⅝-basket. No. 2 potatoes range all the way from 40@75c per ⅝-basket as to condition and quality. There are not very many beans coming to the market at the present time, but as most of them are of rather poor quality, lower prices are prevailing and a range of 35@75c per ⅝-basket would about cover quotations on green beans, while the wax beans bring all the way from 40c@$1 per ⅝-basket. The Eastern Shore is sending a few beans but in hardly sufficient quantities to quote intelligently. The supply of bunch beets continues rather light and sales are being made from 3 cents up to 6 cents per bunch. The supplies of cabbage have been increasing ever since our last report, and prices gradually declined until the close of last week sales were being made mostly around $20@25 per ton for domestic, with Danish up to $30. There was a little firmer tone to the market today however, and the market is probably $5 per ton higher, with sales ranging from $20@30 per ton for domestic with Danish at $30@35 per ton. The nearby cabbage in ⅝-bushel baskets sold this morning at 50@85c per basket. Carrots are moving very slowly at lower prices, 100 lbs. sacks of rough carrots selling today at $1.25, while those in bushel baskets ranged mostly around 90c@$1. The nearby washed carrots in ⅝-bushel baskets are selling generally at 65@85c per basket.

Cauliflower is very much lower than it was a week ago, as the supplies are much more plentiful, and today best fancy cauliflower sold at $2 per crate, with No. 1 stock at $1.50, and choice at $1 per crate. Celery is also lower under heavier supplies. New York state celery selling at 25@75c per bunch and Kalamazoo at $1.75@2.25 per large crate and $1@1.25 per small crate. Corn is selling at just about the same price as last week, the Pennsylvania selling at $1.50@3.50 per hundred ears while the New Jersey sells at 50c@$1.25 per ⅝-basket. Cucumbers are in light supply, but are showing a very wide range in quality making a corresponding wide range in price.

Lima beans are selling just a trifle lower then they did a week ago as ⅝-bushel baskets are now selling at $1.10@1.35 per basket, mostly $1.15@1.25. Bushel hampers sold today $1.50@2.25 per hamper. The onion market is about steady on fancy onions at $3@3.50 per sack of 100 pounds, with some poor onions as low as $2.25@2.50 per sack. Green peppers continue to remain about steady at 30@50c per ⅝-basket, but the red peppers are quite a little lower then they were a week ago and are now selling at 40@65c per basket. Radishes are practically unchanged at $1@1.50 per hamper. Romaine is meeting a good demand at 75c@$1 per box, with prospects of a still higher market. Squash is rather scarce but as the offerings are mostly poor prices are showing no improvement and sales are made mostly around 75c per ⅝-basket. New Jersey tomatoes are selling mostly at $1@1.50 per ⅝-basket with now and then some very fancy bringing $1.50@2, but their season is practically over and tomatoes are beginning to arrive from far distant points, the first car of the season from California arriving today and selling at $1 per lug. Most of the arrivals however are from Pennsylvania which are selling mostly at 75@90c per 14-quart basket.

Fruits

Pennsylvania and New Jersey continue to supply the market with a few apples but the greater bulk coming from Virginia, Pennsylvania and New York States. Practically all of the 22 cars offered at the depot this morning being from these three states except for a few far Western box apples. Strictly fancy apples are bringing high prices. Sales are being made on about the following basis. Barrels: Maiden Blush, $4@8; Grimes Golden, $4.50@7.50; fancy, $8.50; Jonathans, $4@8.50, a few sold at $9; Twenty Ounce, $5@7; Wealthy, $5@7.50; Greenings, $4@6.25; Hubs, $5@6.50; Staymans, $5@7.50; Fancy 3 inch, $8; York Imperial, $6.50@7.50; Baldwins, $4@6; Delicious, $9@9.50. Quinces per barrel, $3@3.75; per bushel, $2.25@2.75; Peaches, N. Y. Elbertas per bushel, $3@3.25; Grapes Black Variety, jumbo basket, $1@1.05; pony basket, 18@23c; 4-quart basket, 30c; White Variety, jumbo basket, 90c@$1; pony basket, 18@22c; Delaware, pony basket, 20@22c.

Poultry

Live poultry ruled high last week on account of the Jewish holidays, Rosh-Ashana, which were observed on Thursday and Friday. Immediately after, however, prices began to decline and the market has ruled weak and lower ever since. Today, prices ranged as follows: Fowls, 28@34c, chickens, 28@34c; ducks, 25@30c; old roosters, 23@25c.

Eggs

Offerings of strictly fancy fresh eggs are extremely light and the market has advanced 3 cents per dozen since last week, and the prospects are for a still higher market. At this writing fancy nearby firsts are selling at 57c, and current receipts with well-known brands bringing a premium over these prices. Western eggs are selling at 54@55c per dozen for firsts, with extra firsts at 57c.

LANCASTER PRODUCE

Lancaster, Pa., Sept. 29, 1919.

Business was brisk in all produce markets here today with offerings large and the attendance of farmers above normal. Prices were held firmly at last week's figures, eggs selling rapidly at 65 cents a dozen. There were only slight changes either way in the other prices.

Butter and Eggs.—Creamery butter, 65c per lb.; country butter, 65@70c. Fresh eggs, 65c per dozen; duck eggs, 50c; goose eggs, 10 cents each.

Poultry.—Dressed old chickens, $1.75@2 each; dressed young chickens, 85c@$1.30; no offerings of live fowls.

Vegetables.—Corn, 15@25c dozen; beets, 5c bunch; beans, 10@12c ½ peck; tomatoes, $1 basket; do., 6@8c box; lima beans, 50c quart; cauliflower, 10@15c head; cabbage, 5@10c head; sweet potatoes, 35c ½ peck; potatoes, $1.75@2 per bushel; do., 30c ½ peck; turnips, 15c ½ peck; spinach, 20 cents ½ peck; parsnips, 5c per box; lettuce, 15@20c head.

Fruits.—Apples, 20@40c ½ peck; peaches, 15c box; watermelons, 35@85c each; cantaloupes, 5@8c each; pears, 20@25c ½ peck.

Grain Market.—Wheat, $2.20 per bu.; rye, $1.65; oats, 85c; corn, $1.95; timothy hay, $30 per ton; mixed hay, $28; wheat straw, $10; oat straw, $5.

YORK PRODUCE MARKETS

York, Pa., Sept. 29, 1919.

The market situation has not improved in York, and it is not expected it will be any better until after the County Fair. Corn at 15 to 20 cents per dozen. Lima beans at 20c quart, and tomatoes at 30@40c per basket were some of the features of the week's markets. Potatoes are not in demand at any price.

Eggs.—60@65c per dozen.

Butter.—Country, 60@65c lb.; separator, 65@70c lb. Milk, 10c quart.

Poultry.—Hens, 24@26c lb.; springers, 25@26c lb.; dressed, 75c@$1.75 each.

Vegetables.—Potatoes, 15@25c ½ peck; $1@1.75 a bushel; cabbage, 3@10c head; lettuce, 2@5c head; radishes, 3@5c bunch; beets, 5c box; onions, 5c bunch; 20@25c ½ peck; lima beans, 20@25c pint; soup beans, 18@25c quart; celery, 5@10c stalk; egg plants, 3@8c; beans, 10@15c ½ peck; tomatoes, 10@30c ½ peck; lard, 38@43c lb.; corn, 15@30c dozen.

Fruit.—Apples, 10@50c ½ perk; $1.50@2 per bu.; peaches, 30@60c ½ peck; $1.50@2 per basket; pears, 5@10c box.

Retail Grain Market.—Wheat, $2.40; corn, $2.25; oats, $1.01; rye, $1.65; bran, $3 per cwt.; middlings, $3.50 cwt.

Wholesale Grain Market.—Wheat, $2.25; corn, $2.10; oats, 89c; rye, $1.40; bran, $48 per ton; middlings, $65 per ton.

BALTIMORE PRODUCE

Baltimore, Md., Sept. 29, 1919.

Produce.—Potatoes, $2.50@2.75 cwt. Cabbage, nearby, $4@6 per 100. New York, $40 ton. Lettuce, 75c@$1 basket. Onions, nearby, $3@4. Cucumbers, $1.75@2.25 bushel. Carrots, 1@3c bunch. Lima beans, $1@1.10 bushel. Beets, 3@4c bunch. Green corn, 15@20c dozen. Tomatoes, 60@75c basket. Squash, 40@50c basket.

Fruit.—Apples, Maryland and Virginia, fancy, $3@4. Pennsylvania, $6@7 barrel; Cantaloupes, $1@1.25 crate. Watermelons, $20@40 per 100. Pears, $3.50@4 barrel. Crabapples, $1@1.25 basket.

Butter.—Creamery, western fancy, 58@59c; choice, 55@56c; pound prints, 59@60c. Nearby rolls, 43@44c. Dairy prints, 43@44c.

Eggs.—State, Pennsylvania and nearby, 52c; Eastern Shore and Virginia, 52c; Southern, 48@49c.

Live Poultry.—Springers, 31@32c lb.; old roosters, 21@22c; old hens, 30@31c lb.; ducks, young, 26@27c; do., poor, 24@25c; guinea fowls, 65@70c.

Grains.—Bag lots by sample, $2@2.30. Wheat, new, No. 1 red, $2.30; do., No. 3, $2.31¾; garlicky, $2.29; Corn, $1.65@1.75. Oats, standard, white, 75@75½c. rye, nearby, $1@1.50.

Hay.—No. 1 timothy, $31 ton; do., standard, $30.50@31 ton; light clover, mixed, $30 ton. Clover, mixed, $28@28.50. Tangled rye straw, $14.50. Wheat straw, $12@13 ton. Oat straw, $14@15 ton.

NEW YORK PRODUCE

New York City, Sept. 29, 1919.

Butter.—Firm; receipts, 3,569 tubs; creamery, higher than extras, 63½@64c; creamery extras, 92 score, 63c; firsts, 53½@62c; packing stock, current make, No. 2, 45c.

Eggs.—Strong; receipts, 4,946 cases; fresh-gathered extras, 62@64c; extra firsts, 59@61c; firsts, 56@58c; state, Pennsylvania and nearby western hennery whites, fine to fancy, 80@82c; state, do., ordinary to prime, 65@79c; do., browns, 68@72c; do., gathered browns and mixed colors, 62@66c.

Cheese.—Firm; receipts, 689 boxes; state, whole-milk, flats, current make, specials, 30½@31¼c; do., average run, 30@30¼c; state, whole-milk, twins, current make, specials, 30@30½c do., average run, 29½@29¾c.

Live Poultry.—Steady; chickens, 32c; fowls, 29@32c; old roosters, 21c; turkeys, 25@30c.

Dressed Poultry.—Quiet; fowls, 25@39c; old roosters, 21@23c; western chickens, 27@45c; turkeys, spring, 38@45c.

Vegetables.—Potatoes, Long Island, $5@5.25 per 165-lb. bag; Jersey No. 1, $3.50@4.25 bag; No. 2, $2. Beans, green, $1@2 basket; do., lima, 50c@$1.75 basket. Beets, $2@2.50 per barrel. Carrots, $1.50@2.25 per bbl. Cabbage, $4@7 per 100. Lettuce, 25c@$1 basket. Tomatoes, $2@3 per bu. New Jersey, $1@2.50 carrier.

Fruit.—Apples, McIntosh, $4@9; Wealthy $5@7.50. Peaches, $2@4 crate; Jersey, $1.50@3.50 bushel.

PITTSBURGH PRODUCE

Pittsburgh, Pa., Sept. 29, 1919.

Butter.—Prints, 69@69½c; tubs, 68@68½c; cooking, 47@49c.

Eggs.—Fresh select, 56@57c dozen. Candled, 54@55c.

Poultry.—Live; hens, 30@35c lb.; roosters, 21@22c; springers, 33@34c; turkeys, 38@40c. Dressed; hens, 40@41c; roosters, 26@27; ducks, 48c; turkeys, 45@47c.

Vegetables.—Potatoes, sack, $4@5; onions, sack, $3@4; cabbage, bu., $1@1.25; corn, basket, 75c@$1; celery, 35@50c doz.; tomatoes, 40@50c; lima beans, quart, 20@25c.

Fruits.—Apples, $2@2.75 bu. Cantaloupes $2@2.50 crate; peaches, $2.25@3.50 bu.; grapes, 32@33c basket; quinces, $3.25@3.75 bushel.

PHILADELPHIA LIVE STOCK

Philadelphia, Pa., Sept. 29, 1919.

Receipts of live stock for week ending September 27 were as follows:

	Beef Cattle	Sheep and Lambs	Hogs
Total for Week	1,809	4,408	5,611
Previous Week	2,186	9,337	6,287

Calves.—Receipts of calves last week were 1,208 head against 1,135 head week previous.

Beef Cattle.—Steers and heifers were quiet and unchanged. Calves were in good request and firm. Steers, good to choice, $13.50@15; do., fair to good, $11.50@13.50; common to fair, $9.50@11.50; cows, fat, per lb. good to choice, cornfed, 8@10c; fair to good, 7@8c; do., common to fair, 5@7c; calves, extra, choice, $23@23.50; fair to good, $18.50@21.50; common, $12.50@16.50; heavy, $8.50@12.50; Tennessee, choice, $18@20; other southern, $9@13.

Sheep and Lambs.—The market was generally firm under light offerings and a fairly active demand and prices of choice lambs were higher. Sheared sheep, wethers, extra, $10.50@11; good to choice, $9@10; medium, $7@8; common, $3.50@5; ewes, fat, heavy, $7.50@8; spring lambs, choice, $15.50@16; medium, $14@15; culls and common, $10@12.

Hogs.—Offerings were moderate and the market ruled steady with a fair demand. quotations for best western, $20@20.50; nearby, good, $18.

City Dressed Stock.—The market for hogs was dull and easier. Other descriptions were in fair request and firm, with prices of some kinds higher. Quotations: Steers, 17@24c; heifers, 15@21c; cows, 11@17c; calves, city dressed, choice, 28@30c; country dressed, 24@26c; sheep, 16@22c; lambs, spring, 25@28c; hogs, 26@26½c.

LIVESTOCK

Pittsburgh, Pa., Sept. 29.—Cattle higher; supply 75 loads; prime, $15@15.50.

Sheep.—Active; supply 15 double decks; prime wethers, $10@10.50; culls and common, $2@4; lambs, $8@15.75; calves, $22@22.50.

Hogs.—Steady; supply 40 double decks; prime heavies, $17.25@17.50; medium and heavy yorkers, $17.75@18; light yorkers, $17@17.25; pigs, $16.50@17; roughs, $14@15.25.

Chicago, Ill., Sept. 29.—Hogs.—Receipts, 30,000; estimated tomorrow, 27,000; closed 25@50c lower; heavy, $16@17.25; medium, $16.50@17.50; light, $16.50@17.50; light lights, $16@17.40; heavy packing sows, smooth, $15.25@15.75; packing sows, rough, $14.75@15.25; pigs, $15.25@16.25.

Cattle.—Receipts, 26,000; estimated tomorrow, 14,000; firm; beef steers, medium and heavy-weight, choice and prime, $16.25@18; medium and good, $11.25@16.25; common, $8.50@11.25; lightweight good and choice, $14.50@17.75; common and medium, $5@14.25; butcher cattle, heifers, $6.50@14.75; cows, $6.50@13.50; canners and cutters, $5.50@6.50; veal calves, $20@21.25; feeder steers, $7@12.50; stocker steers, $6.25@10; western range steers, $6@15; cows and heifers, $6.50@13.

Sheep.—Receipts, 40,000; estimated tomorrow, 30,000; higher; lambs, $13@15.50; culls and common, $8.50@12.75.

Lancaster, Pa., Sept. 29.—Cattle.—Receipts, 6,127, against 6,210 head last Monday; market quiet; prices steady; good to choice steers, $13.25@14.85; fair to good steers, $12.10@13.10; medium to fair steers, $11.75@12.40; common to medium steers, $9.60@10.90; smooth and fat bulls, $10.25@11.25; medium to good bulls, $9.50@10; common to medium bulls, $7.25@8.25; smooth and prime heifers, $12.50@13.25; common to medium heifers, $8.25@10.40; good to choice cows, $8.25@10; fair to good cows, $7.50@8.50; common to medium cows, $5.75@6.25; stock bulls, $7.25@9.85; good to prime calves, $20@22; medium to good calves, $18@19.25; common to medium calves, $14@17.

Hogs.—Receipts, 407 head; market fair active; prices lower; good to prime, $18@19; light to medium, $16@17.75; roughs, $15@16; stags to sows, $14@15.

New York City, N. Y., Sept. 29.—Beeves.—Receipts, 5,240; firm; steers, $10@16; bulls, $7@9; cows, $3.75@9.50.

Calves.—Receipts, 2,770; firm; veals, $18@25; culls, $13@17.50; skim milk and fed calves, $10.50@14; grassers, $8@10; yearlings, $6@8.50; westerns, $8.50@13.

Sheep and Lambs.—Receipts, 11,520; steady; sheep, $4.50@8; culls, $3@4; lambs, $13@17; culls, $9@12.50.

Hogs.—Receipts, 3,940; steady, at $18@18.25; pigs, $17@17.50; roughs, $15.

PHILADELPHIA HAY AND GRAIN

Philadelphia, Pa., Sept. 29, 1919.

Baled Hay and Straw.—Receipts, 204 tons of hay and 2 cars of straw. Fine hay was steadily held, but the low grades were irregular in value. Timothy hay, No. 1, $31@32; No. 2, $28@30; No. 3, $24@27; clover-mixed hay, light mixed, $28@30 No. 1 mixed, $26@27.

Straw.—No. 1 straight rye, $14; No. 2 do., $12.50@13; No. 1 tangled rye straw, $13; No. 2 do., $12@12.50; No. 1 wheat straw, $12.50@13; No. 2, do., $11.50@12; No. 1 oat straw, $12.50@13; No. 2 do., $11.50@12.

Bran.—Supplies small and the market quiet and unchanged. We quote: Car lots, to arrive, including sacks, western soft winter bran, in 100-lb. sacks, per ton, $45@46; spring bran, in 100-lb. sacks, per ton, $44@45.

Corn.—Yellow, to arrive, $1.65@1.70.

Oats.—No. 2 white, 78@79c; No. 3, 77@78c.

NEW YORK HAY AND GRAIN

New York City, Sept. 29, 1919.

Feed.—There was only a moderate business in the market for mill feed and the undertone was easy owing to the attitude of buyers and evidences that mills were still disposed to sell.

Quotations: City feed, bran, $44; middlings, $58 in 100-pound sacks; red dog, $69, nominal, in 100-pound sacks; Western spring bran, $41.50@42; standard middlings, $57.50@58; flour middlings, $62.50@63; red dog, $70@71, all in 100-pound sacks, 30 day shipment. Oat feed, $30@31; rye middlings, $56; white hominy feed, nominal, all in 100-pound sacks. Cottonseed oil meal, October shipment, $71; linseed oil meal, $74, in 100-pound sacks.

Hay and Straw.—There are some 60 cars of hay in the New York Central yard at 33d Street, and we understand that heavy supplies are headed toward Brooklyn. Trade is very quiet and market is still tending downward. Rye straw steady. Oat straw scarce and wanted.

Hay.—No. 1 large bales, $34 ton. No. 2, $30@32 ton; No. 3, $27@29; shipping $24@26 ton. Fancy light clover mixed, $30@32 ton. Clover, No. 1, mixed, $27@29.

Straw.—Per ton, No. 1 rye, $16; No. 1 oat, $14@15.

Wheat.—No. 2 red, $2.37½; No. 2 hard winter, $2.37½.

Corn.—No. 2 yellow, $1.59; No. 3 yellow, $1.58½.

Oats.—No. 2 white, 79½c; No. 3 white, 78@79c.

Rye.—Export, $1.55.

PITTSBUROH HAY AND GRAIN

Pittsburgh, Pa., Sejt. 29, 1919.

Hay.—No. 1 timothy, $30@31; No. 2, $28.50@29.50; No. 3, $25@27; No. 1 light mixed, $29.50@30; No. 1 clover mixed, $31.50@32; New No. 2 clover mixed, $26@28.

Straw.—Receipts of straw, with the possible exception of oat are in excess of demand. Market not very enthusiastic.

No. 1 oat, $11.50@12; No. 2, $11@11.50; No. 1 wheat, $11@11.50; No. 2, $10.50@11; No. 1 rye, $11.50@12; No. 2, $11@11.50.

Ear Corn.—Arrivals, very few. Market quiet. Yellow No. 2, $1.70@1.75.

Oats.—Receipts about equal demand. Market steady. No. 1 white, 73¼@73¾c; No. 2, 74¾@75c; No. 3 white, 73½@74c.

PHILADELPHIA DAIRY MARKET

Philadelphia, Pa., Sept. 29, 1919.

Butter.—Receipts, 2854 tubs. There was little doing in this market in a wholesale way and prices were nominally unchanged. The Produce Exchange was closed as usual on Saturday. Quotations: Fresh, solid-packed creamery, fancy, high-scoring goods, 64@66c; the latter for jobbing sales; extras, 63c; extra firsts, 60@62c; firsts, 55@58c; seconds, 50@53c; sweet creamery, choice and fancy, 65@67c; do. fair to good, 59@64c; ladle-packed, as to quality, 46@48c; packing stock, 44@46; fancy brands of nearby prints jobbing at 69@71c; good to choice, 63@68c; fair, 58@61c.

Cheese.—Was quiet and unchanged. New York whole milk flats, fancy, 31¾@32c; fair to good, 30½@31½c; Wisconsin, whole milk, flats, fancy, 31½c; fair to good, 30@31c; jobbing sales of fancy goods, 30@31c; jobbing sales of fancy goods, 32¼@33c.

NEW YORK MILK MARKET

New York City, Sept. 29, 1919.

Trade opened dull early in the week but closed with a better demand. Surplus a trifle heavier than the week previous. October rate for 3 percent milk in 200-210 mile zone is $3.11 per 100 lbs.; the 3.06 percent milk is $3.35 and the 4 percent $3.51.

Receipts of milk and cream in 40-quart cans for the week ending September 27th, 1919, were as follows:

Railroad	Milk	Cream
Erie	40,903	4,243
Susquehanna	5,910	92
West Shore	15,414	1,982
Lackawanna	60,351	2,808
N. Y. Central (long haul)	150,824	2,590
Ontario	48,263	1,998
Lehigh Valley	45,764	963
New Haven	6,856	72
Pennsylvania	12,225	478
Other sources	6,000	300
Totals	392,510	15,526
Same week last year	365,863	14,800

TOBACCO MARKET

Recent Government tabulations, including all types of tobacco grown in the country indicate but a slightly reduced total production for the present year. As made known heretofore the acreage has considerably increased which increase made up the shortage on account of drought in many sections. Some sections, as those of Ohio, Pennsylvania and Virginia, show quite a shortage and on that account relatively better prices may be expected in these localities. It should be remembered that unlike other crops each type of tobacco is used for a more or less specific purpose; thus precluding the possibility of general prices as upon corn, wheat, etc. With an increased acreage and but a normal production it follows that the yield per acre will be low, a fact indicating almost beyond doubt poor average quality. Tobacco crops of inferior quality have never returned unusual profits to producers, but when such is the situation those who have a good and thus comparatively rare offering are in position to get fancy prices. It is for such instances that wily speculators in all localities are now hunting and on this account holders of choice crops should be cautious. Transactions in old tobacco during the week were but few in all localities. The few points holding auction sales had but limited offerings sellers apparently prefering to await market development with reference to the new crop. Values were steady in all instances. Several large private transactions were reported but neither the name nor prices could be made positive.

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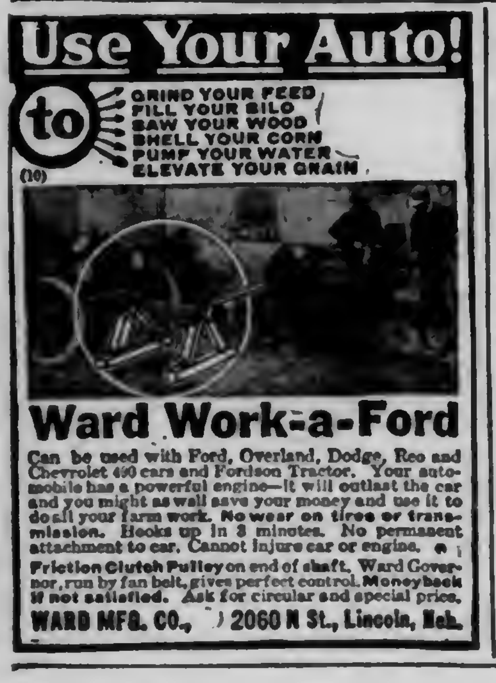

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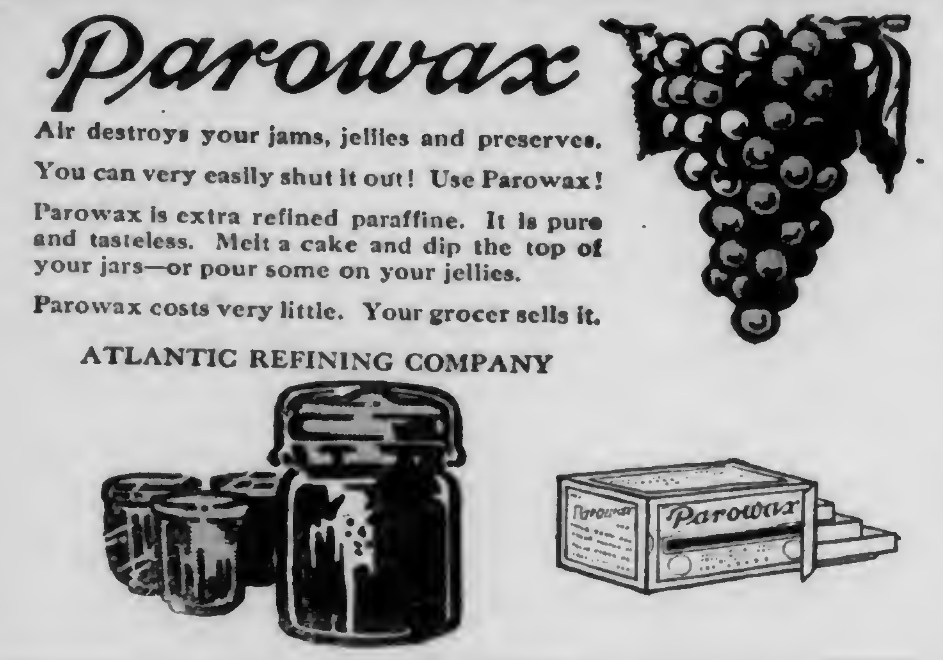

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KEZIAH COFFIN

By JOSEPH C. LINCOLN

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SYNOPSIS

Keziah Coffin, a good-natured widow, is packing up to leave the fishing village to go to Boston, her brother having died and left her alone. Grace Von Horne, ward of Eben Hammond and young friend of Keziah, is assisting her. They are discussing the coming of the new minister for the "Regular" Church, to which denomination Keziah belongs. Grace is a member of the "Come-Outers," a rival set. Between the two a jealous rivalry exists. As the two women work "Kyan" Pepper, a widower comes in and proposes to Keziah, only to be ridiculed. Eben Hammond calls and induces Keziah to become housekeeper for the new and single minister. She accepts and Grace goes with her to prepare the house for his coming. The new minister arrives and he and Keziah become friends at once. Keziah proceeds to make him acquainted with local conditions—especially the strained relations between the two sects.

"Good night," said the young man, extending his hand. "Good night, Miss—or is it Mrs.—Coffin?"

"Mrs. Good Night."

"She's a widow," explained Matilda. "Husband died 'fore she come back here to live. Guess he didn't amount to much; she never mentions his name."

"There was one thing I meant to tell her," mused the minister, hesitating on the threshold. "I meant to tell her not to attempt any cleaning up at the parsonage tonight. Tomorrow will do just as well."

"Heavens to Betsy!" sniffed the "hired help," speaking from the depths of personal conviction, "nobody but a born fool would clean house in the night, 'specially after the cleanin' she's been doin' at her own place. I guess you needn't worry."

So Mr. Ellery did not worry. And yet, until three o'clock of the following morning, the dull light of a whale-oil lantern illuminated the rooms of the parsonage as Keziah scrubbed and swept and washed, giving to the musty place the "lick and promise" she had prophesied. If the spiders had prepared those ascension robes, they could have used them that night.

After breakfast the wagons belonging to the Wellmouth furniture dealer drove in at the gate of the little house opposite Captain Elkanah's, and Keziah saw, with a feeling of homesickness which she hid beneath smiles and a rattle of conversation, the worn household treasures which had been hers, and her brother's before her, carried away out of her life. Then her trunks were loaded on the tailboards of the wagons, to be left at the parsonage, and with a sigh and a quick brush of her hand across her eyes, she locked the door for the last time and walked briskly down the road. Soon afterwards John Ellery, under the eminently respectable escort of Captain Elkanah and Miss Annabel, emerged from the Daniels's gate and followed her. Mrs. Didama Rogers, thankful for a clear atmosphere and an unobstructed view, saw them pass and recognized the stranger. And, within a quarter of an hour, she, arrayed in a hurried calling costume, was spreading the news along the main road. The "Trumet Daily Advertiser" had, so to speak, issued an extra.

Thus the new minister came to Trumet and thus Keziah Coffin became his housekeeper. She entered upon her duties with the whole-hearted energy peculiar to her. She was used to hard work, and, as she would have said, felt lonesome without it. She cleaned that parsonage from top to bottom. Every blind was thrown open and the spring sunshine poured in upon the braided mats and the rag carpets. Dust flew in clouds for the first day or two, but it flew out of windows and doors and was not allowed to settle within. The old black walnut furniture glistened with oil. The mirrors and the crockery sparkled from baths of hot water and soap. Even St. Stephen, in the engravings on the dining-room wall, was forced to a martyrdom of the fullest publicity, because the spots and smears on the glass covering his sufferings were violently removed. In the sleeping rooms upstairs the feather beds were beaten and aired, the sheets and blankets and patchwork comforters exposed to the light, and the window curtains dragged down and left to flap on the clothesline. The smell of musty dampness disappeared from the dining room and the wholesome odors of outdoors and of good things cooking took its place.

Keziah, in the midst of her labors, found time to coach her employer and companion in Trumet ways, and particularly in the ways which Trumet expected its clergymen to travel. On the morning following his first night in the parsonage, he expressed himself as feeling the need of exercise. He thought he should take a walk.

"Well," said his housekeeper from her station opposite him at the breakfast table, "if I was you I wouldn't take too long a one. You'd better be back here by ten, anyhow. Where was you thinkin' of goin'?"

Mr. Ellery had no particular destination in mind. He would like to see something of the village and perhaps, if she could give him the names of a few of his parishioners, he might make a few calls. Keziah shook her head.

"Gracious goodness!" she exclaimed. "I wouldn't advise you to do that. You aint been here long enough to make forenoon calls. If you should catch some of the women in this town with aprons and calico on, they'd never forgive you in this world. Wait till afternoon; they'll be expectin' you then and they'll be rigged out in their best bibs and tuckers. S'pose you found Annabel Daniels with her hair done up in curl papers; what do you think would happen? Mornin's are no time for ministers' calls. Even old Mr. Langley never made calls in the forenoon—and he'd been here thirty-odd years."

"All right, you know best. Much obliged for the advice. Then I'll simply take my walk and leave the calls until later."

"I'd be back by ten, tho. Folks'll begin callin' on you by that time."

"They will? Doesn't the rule work both ways?"

"Not with new ministers it don't. Cat's foot! You don't s'pose Didama Rogers and Laviny Pepper and their kind'll wait any longer'n they can help afore they come to see what you look like, do you?"

"Well, they must have seen me when I preached here before. I remember——"

"Mercy on us! that was in meetin'. Meetin's diff'rent. All they could say to you then was how much they liked your sermon. They say that to every minister that comes, no matter how they may pick him to pieces afterwards. But here they can ask you questions; about how you came to come here and what you think of it far's you've got, and what your views are on certain points in the creed. Likewise, who your folks were and whether they was well off, and a few things like that. Then they'll want to see what kind of clothes you wear and——"

"Whew!" Ellery whistled. "You're unfolding a pleasant prospect for me, I must say. Am I supposed to be catechized on all of my private affairs?"

"Of course! A minister hasn't got any private affairs; he's a public character. There!" she laughed, as she poured the coffee, "I mustn't discourage you. But don't you see that every mother's son—and, for that matter, every daughter and children's child unto the third and fourth generation—feel that, so long as they pay pew rent or put a cent in the collection, they own a share in you. And we always keep a watch on our investments down this way. That's the Yankee shrewdness you read so much about, I guess."

The minister absently played with his spoon.

"I'm afraid you're a cynic," he said.

"No, no, I ain't. Tho sometimes, considerin' everything, I feel as tho I had excuse enough if I wanted to belong to that tribe. But you're young. You mustn't mind my sayin' that; if you was old, of course, I wouldn't talk about ages. But you are young and this is your first church. So you must start right. I'm no cynic, bless you. I've got trust in human nature left—most kinds of human nature. If I hadn't, I'd have more money, I s'pose. Perhaps you've noticed that those who trust a good deal are usually poor. It's all right, Mr. Ellery; you go and take your walk. And I'll walk into that pantry closet. It'll be a good deal like walkin' into the Slough of Despond, but Christian came out on the other side and I guess likely I will, if the supply of soapsuds holds out."

When, promptly at ten o'clock, the minister returned from his walk, he found Mrs. Rogers waiting in the sitting room. It is a prime qualification of an alert reporter to be first on the scene of sensation. Didama was seldom beaten. Mr. Ellery's catechism began. Before it was over Keziah opened the door to admit Miss Pepper and her brother. "Kyan" was nervous and embarrassed in the housekeeper's presence. Lavinia was a glacier, moving majestically and freezing as it moved. Keziah, however, was not even touched by the frost; she greeted the pair cordially, and begged them to "take off their things."

It was dinner time before the catechizers departed. The catechized came to the table with an impaired appetite. He looked troubled.

"Don't let it worry you, Mr. Ellery," observed Keziah calmly. "I think I can satisfy you. Honest and true, I ain't half as bad as you might think."

"Why, Mrs. Coffin!" he cried. "Could you hear———"

"No, no! I couldn't hear nothin' in that closet except my own opinion on dirt and dust. But if I was as deaf as the man that set on the powder keg and dropped his pipe ashes into it, it wouldn't have made any difference. The man said after they picked him up that they needn't have been so rough, he'd have moved without bein' pushed if they'd have made signs they wanted to use the keg. And if I was out in the next lot I'd have known what you was listenin' to in that sittin' room. They hinted that they were real sorry for you, but 'twasn't any of their doin's. The parish committee, bein' just men, was apt to make mistakes in certain matters. Of course everything might be well enough, and if you wa'n't too particular about cookin' and so on, why—Anyhow, you mustn't think that they were criticisin'. 'Twas only that they took an interest and—That was about it, wasn't it?"

"Mrs. Coffin, I—I hope you don't think I paid any attention to their remarks—of that kind, I mean. Honestly, I did my best to stop them. I said——"

"Man alive! I'm not worried. Why should you be? We were talkin' about trust just now—or I was. Well, you and I'll have to take each other on trust for a while, until we see whether we're goin' to suit. If you see anything that I'm goin' wrong in, I wish you'd tell me. And I'll do the same by you, if that's agreeable. You'll hear a lot of things said about me, but if they're very bad I give you my word they ain't true. And, to be real frank, I'll probably hear some about you, which I'll take for what they're worth and considerin' who said 'em. That's a good wholesome agreement, I think, for both of us. What do you think?"

John Ellery said, with emphasis, that he thought well of it. He began to realize that this woman, with her blunt common sense, was likely to be a pilot worth having in the difficult waters which he must navigate as skipper of the Regular Church in Trumet. Also, he began to realize that, as such a skipper, he was most inexperienced. And Captain Daniels had spoken highly—condescendingly but highly—of his housekeeper's qualifications and personality. So the agreement was ratified, with relief on his part.

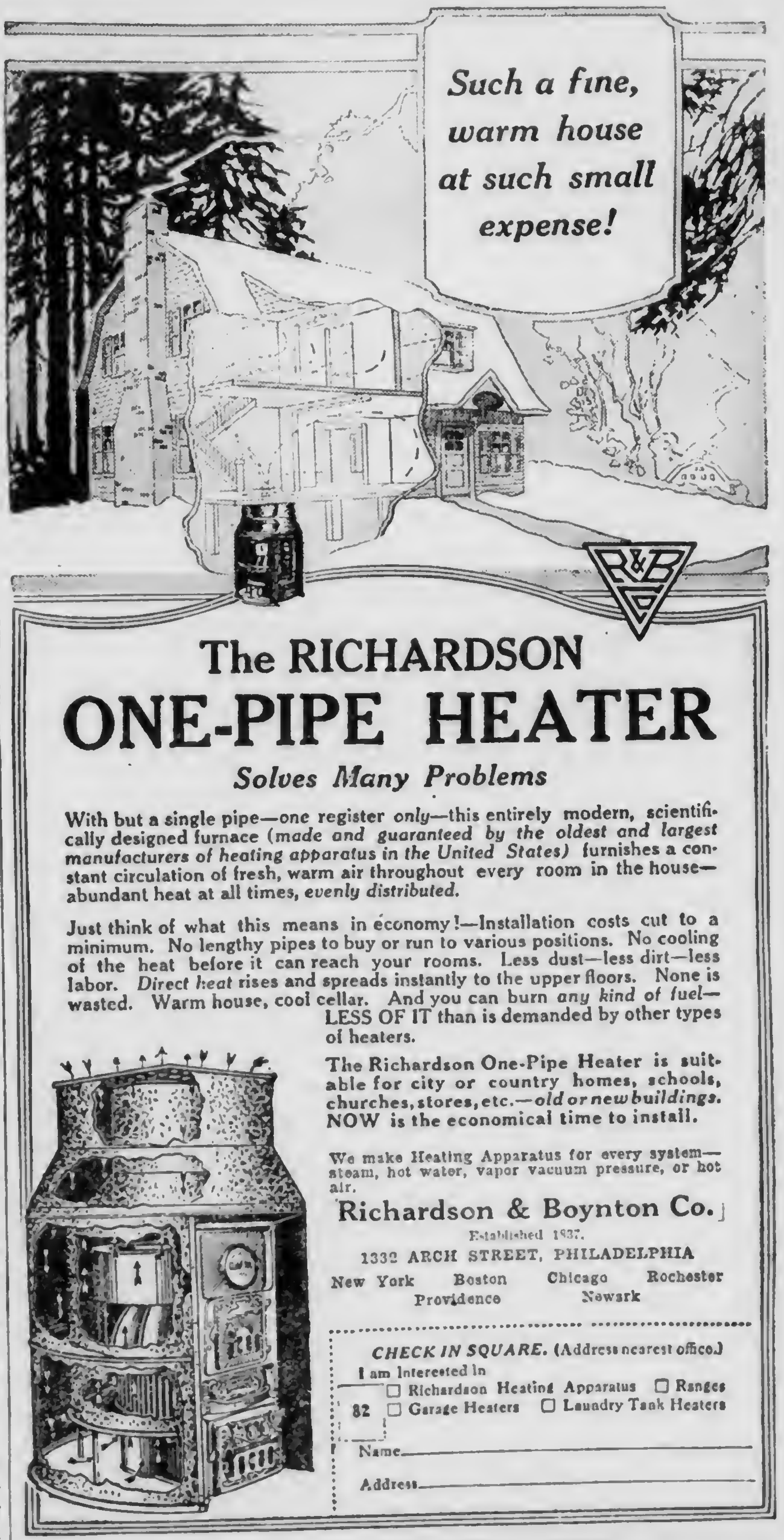
The first Sunday came and with it the first sermon. He read that sermon to Keziah on Saturday evening and she approved of it as a whole, tho she criticised some of its details.

"Don't be afraid to put in plenty of salt," she said. "Where you've got the Christian life and spirit written down as bein's like a quiet, peaceful home, free from all distrust, and like that, why don't you change it to a good safe anchorage, where the soul can ride forever without fear of breakers or no'theasters or the dangers besettin' the mariner on a lee shore. They'll understand that; it gets right home to 'em. There's scarcely a man or a woman in your congregation that ain't been out of sight of land for weeks on a stretch."

The breakfast hour on Sunday would be at nine o'clock, instead of seven, as on week days, she told him.

"Trumet lays to bed Sunday mornin's," she explained. "It's almost a part of its religion, as you might say, and lived up to more conscientious than some other parts, I'm afraid. Six days shalt thou labor and wear comfort'ble clothes; and on the seventh you must be lazy and dress up. Likewise you must have baked beans Saturday for supper, as we're havin' 'em, and more beans with fish balls next mornin'. That is, if you want to be orthodox."

(Continued Next Week.)



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Just think of what this means in economy!—Installation costs cut to a minimum. No lengthy pipes to buy or run to various positions. No cooling of the heat before it can reach your rooms. Less dust—less dirt—less labor. *Direct heat* rises and spreads instantly to the upper floors. None is wasted. Warm house, cool cellar. And you can burn *any kind of fuel*—LESS OF IT than is demanded by other types of heaters.

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We make Heating Apparatus for every system—steam, hot water, vapor vacuum pressure, or hot air.

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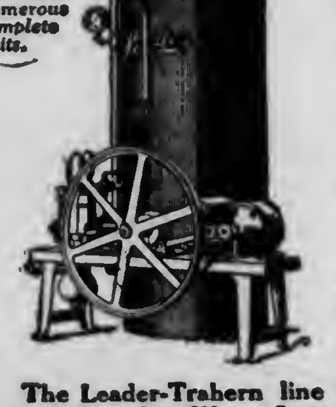
Ayrshires at Public Auction
TUESDAY, OCTOBER 14, 1919
BETWEEN ONE AND THREE P. M.
At Glengary Stock Farm, located at Hudson, Ohio

1-2 Mile North of town on Aurora St. This is the property of the late Robert F. MacKenzie. The herd consists of 6 milk cows, 14 heifers and Glengary Champion, who was one year old, September 12, 1919 and will make a fine herd bull.

GLENGARY STOCK FARM, HUDSON, OHIO
Chas. Peterson, D. A. Billings, Clerks. J. R. ALBRIGHT, Auct.



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Everybody knows Leader-Trahern water systems for the *perfection* of their units. Highest quality, highest durability—these are the factors that have given satisfaction to all Leader-Trahern customers and universal fame to the Leader-Trahern line.

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PENNS VALLEY STOCK FARM
Percherons, Berkshires, Holsteins
"Young Service Boars, pigs either sex."
W. F. RISHEL. CENTRE HALL, PA.

Ayrshires, Percherons and Berkshires
We have what you want.
CRESMONT FARM, SUNBURY, PA.

HAY AND POTATOES
Poultry and all produce wanted at market prices. Good, steady, active demand. GIBBS & BRO., 325 N. FRONT STREET, PHILADELPHIA, PA.

WANTED Nuts (all kinds), calves, poultry, fancy eggs and Hot House lambs. WM. H. COHEN & CO., 232 Washington Street, New York City.

Near-By Stock Farm Offers Reg. Ayrshire cattle; Reg. Berkshire pigs, all ages; White Wyandottes, all the most popular blood lines. J. A. McMAHAN, Pottsgrove, Pa.

Chester White Hogs, All Ages
Shorthorn Bulls. R. L. MUNCE, Canonsburg, Pa.

SHROPSHIRE AND SOUTHDOWN RAMS of the best quality, at reasonable prices. Correspondence invited. L. M. Colbert's Sons, East Chatham, N. Y.

SHROPSHIRE YEARLINGS AND RAM LAMBS of wool-mutton quality. Also O. I. C. boar pigs of April farrow. C. P. ANDREWS, Dansville, Mich.

For Sale: Registered C. W. gilts and serviceable boars and pigs. Also Jersey Bulls, all ages. J. A. BOAK, NEW CASTLE, PA. R. 4.

REG. DELAINE RAMS, sire weight 190 lb., fleece 28 lbs.; 25 good ones. Write at once for selection. J. C. WEATHERBY, TRUMANSBURG, N. Y.

WANTED to hear from farmers who wish to buy everything they need at 10 to 50% below retail prices. Address—Box 91, East Greenville, Pa.

Poultry

For Sick Chickens
Preventive and curative of colds, roup, canker, swelled head, sore head, chicken pox, limber neck, sour crop, cholera, bowel trouble, etc. Mrs. T. A. Morley of Galien, Mich., says: "Have used Germozone 17 yrs. for chickens and could not get along without it." Geo. F. Vickerman, Rockdale, N. Y., says: "Have used Germozone 12 years; the best for bowel troubles I ever found." Frank Stuka, Chicago, Ill., writes: "I have lost but 1 pigeon and no chickens in the 3 yrs. I have been using Germozone." C. O. Petrain, Moline, Ill.: "I never had a sick chick all last season." Bernard Horning, Kirksville, Mo., says: "Cured my puniest chicks this spring." Ralph Wurst, Erie, Pa., says: "Not a case of white diarrhoea in 3 yrs. I raise over a thousand a year." Good also for rabbits, birds, pet stock.
GERMOZONE is sold generally at drug and seed stores. Don't risk a substitute. We mail from Omaha postpaid in new 25c, 75c and $1.50 sizes. Poultry books free.
GEO. H. LEE CO., Dept. 429 OMAHA, NEB.

LOOK BABY CHICKS $13 A 100 UP
By Special Delivery Parcel Post, postage paid 20 different thorobred breeds. Utility & Exhibition grades. Live delivery guaranteed. Capacity 100,000 weekly. Catalog free. NABOB HATCHERIES, Gambier, Ohio

Selby Service Satisfies Ship us your produce, poultry and eggs. Penna. Potatoes a specialty. Returns day goods are sold. Ask for our market letter.
SELBY PRODUCE CO., PHILADELPHIA

200 White Leghorn Hens, Barron Strain
$1.75 each. Cockerels 5 months old $1 each.
L. R. TANGER, YORK SPRINGS, PA.

FOR SALE 500 COCKERELS. Improve your stock with Barron's high-egg-record stock. For quick sale $1 to $2 each. G. ROUTZAHN, ASPERS, PA.

S. C. WHITE LEGHORN 2 yr. old hens; some fine early cockerels cheap. Tom Barron strain.
C. P. SHIREY, STEWARTSTOWN, PA.

Wanted Two cases 30 doz. each strictly fresh laid white Leghorn eggs weekly.
J. Mueller, 630 Palisade Ave., West New York, N. J.

Barred Plymouth Rocks (Pullet line) Buttercups and Ancona Cockerels. Also limited supply of pullets. Prices reas. J. K. Cadwallader, Wellsville, Pa. R. 1.

Dispersal Sale of Registered Holstein Cattle
At Auction---120 Head
Tully, N. Y., Oct. 14, 1919---9 A. M.

The entire herd of C. W. Stevens, Delta, Ont., headed by a bull from the same dam as May Echo Sylvia, the world's record milch cow, and Canada's first 40-lb. cow, consisting of 30 of his daughters, 40 cows bred to him, and several daughters of a 38-lb. bull bred to a 34-lb. bull; prize winners at Ottawa Fair. 22 animals selected from the herd of N. S. Beebe & Son, and several head from the herds of Helmer and Ashbocker of Evans Mills, N. Y. Registered bulls with record dams up to 31 lbs. of butter in 7days and over 600 lbs. of milk. Now is your chance to get started right with world's record milk and butter record breeding, and the very best individuals. Every animal must be sold on day of sale as I have no room for them. All animals over 6 months old tuberculin tested. For catalog address

JOHN C. REAGAN, TULLY, N. Y.

COUNTY NOTES

Mifflin County, Sept. 15.—We are having fine weather—cool at night and warm thru the day. Farmers are busy filling silos and preparing the ground for seeding; not much seeding done yet in this part of the county. Early planted corn is ready to cut while the late should have no frost this month yet to mature well. Potatoes a light crop, selling for $1.75 and $2 a bushel; apples a half-crop selling for $1 a bushel for droped ones and $1.60 for hand picked. Tomatoes are selling for $1.20 a bushel, plums $2.50 to $3.20. We are having a good market at Mattawana every week by people from Altoona, Pa., for all kinds of produce. Eggs, 46c; butter, 55c; old corn, $2.25; oats, 65c. Last week the farmers brought their cattle out of the mountain pasture; are looking well, some fit to kill. Pasture is good on the farms, has been on account of so much rain. Cornfields are grown up with weeds such as we have not seen for many years, corn will likely be a bumper corp.—J. H. Byler.

Lebanon County, Pa., (SE) Sept. 13.—Last few days have been cold and have given some of us a scare on account of the tobacco crop. Farmers are busy harvesting it in all sections of this part of Lebanon, and thruout Lancaster. The crop will be fair but not unusual. Silo-filling is practically completed and corn cutting is next on the program. Most of the fall plowing has been done, but no wheat will be sown until later on account of the Hessian fly. Potatoes are almost all dug and give varying yields, some poor and others fair to good. One of "our folks" dug 1200 bushels from four acres. More and more of us are sowing cover crops for winter. Vetch and rye are commonly used. The corn crop promises to be a bumper one. Last week Mr. Paul Guildin gave poultry culling demonstrations in this section to interested gatherings of farmers and poultry men. Corn is $2.10; oats 95c; potatoes $1.75, rye $1.75 and wheat $2.20 per bushel. Eggs are 54c dozen, young chickens 28c lb., old hens 26c pound. —Leonard F. Strickler

LIGHT TOMATO PACK

The extent of the shortage in the Tri-States' tomato pack is being variously estimated at 3,000,000 cases, which would be a very small output for that territory, which has not made a pack that small in eighteen years or since 1901. The pack of Maryland alone has not fallen as low as 3,000,000 cases of tomatoes since 1905, when she packed 2,295,000 cases, altho she came perilously near going under the three million-case mark again in 1915, when Maryland's total output of canned tomatoes, basis of No. 3s, was only 3,084,000 cases.

The year before, in 1914, Maryland packed 5,850,000 cases, and in both 1913 and 1912 her total output of canned tomatoes had considerably exceeded 6,000,000 cases. In 1911 it was 3,908,000 cases and in 1910 3,675,000 cases.

These figures show that a pack for the Tri-States approximately 3,000,000 cases would be extraordinarily small. They used to equal that as far back as 1898, when Maryland, Delaware and New Jersey combined packed 3,180,000 cases, 3s basis.

SELECT SEED POTATOES THIS FALL

There is a difference between potato seed and seed potatoes. Either will reproduce, but inasmuch as farmers and potato growers of Pennsylvania use the tubers to produce the new crop, it is far better to select the seed when the potatoes are dug. Good, clean and uniform shaped potatoes should be selected, free from damage from insects or fungus diseases. Potatoes should be kept in the dark and at a temperature that will prevent sprouting in order that the entire strength may be preserved.

The tendency often in the spring is to use culls and potatoes of inferior grade. Besides, good, clean and healthy potatoes are not so easily selected in the spring.

It is just as necessary to select good seed potatoes as it is for the cereal crops. To produce the best crops, it is necessary to get started right.—F. Rasmussen, Sec'y of Agr.

For Houses of Moderate Size

MONROE TUBULAR PIPELESS HEATER

FIRST, there's its simplicity, making putting it in a quick, inexpensive matter.

It's no uncommon thing for two men to install a Monroe complete in one day, and leave a fire in it that night.

With its one pipe and one register, it does as much as many furnaces with many pipes and registers.

Its first cost is nominal.

Its coal cost is reasonable; it burns either hard coal, soft coal or wood.

Look into it carefully.

Send for booklet.

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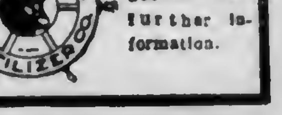
234 James Street, Syracuse, N. Y.
Dealers Everywhere

Reading Bone Fertilizer
Quality Service Satisfaction
Feeding the World:—The American farmer's job. To do your utmost the land should be fed too. Stick to the old dependable when it comes to feeding the land—Reading Bone Fertilizer.
(This trade mark means quality)
Reading Bone Fertilizer Co., Reading, Pa.
Ask your dealer for Reading Bone Fertilizer.
Write for booklet and further information.



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has become so popular in its first four years that thousands have been called for to replace, on their old towers, other makes of mills, and to replace, at small cost, the gearing of the earlier Aermotors, making them self-oiling. Its enclosed motor keeps in the oil and keeps out dust and rain. The Splash Oiling System constantly floods every bearing with oil, preventing wear and enabling the mill to pump in the lightest breeze. The oil supply is renewed once a year. Double Gears are used, each carrying half the load.
We make Gasoline Engines, Pumps, Tanks, Water Supply Goods and Steel Frame Saws.
Write AERMOTOR CO., 2500 Twelfth St., Chicago

Farms

345-Acre Dairy Farm $7000, 4 Horses, 23 Cows and
9 Heifers, bull, calves, poultry, wagons, harness, gasoline engine, binder, drills, walking and sulky plows, complete implements, milk cans, crops, included to quick buyer. Convenient railroad, banking town. 150 acres strong soil tillage, 75-cow wire-fenced pasture, wood and timber should pay for farm, milk checks running $300 monthly. 100 apple trees, other fruit. Good 10-room house, big basement stock barn, corn, hog houses. Aged owner to retire at once sells everything $7000 part cash. Details page 23 Fall Catalog, just out, farm bargains Maine to Florida and West to Nebraska; copy free. STROUT FARM AGENCY, 1422 B E, Land Title Bldg., Philadelphia, Pa.

FRUIT FARM
236 Acres—50 Acres in Orchards
2,000 apples, 3,000 pears, peach and plum trees, planted 1912; thrifty and well cared for. A practical fruit and dairy farm; good buildings; land well watered; proper soil and exposure for fruit; 33 miles from Philadelphia. Price is reasonable. C. P. PETERS AND SON, 608 CHESTNUT STREET, PHILADELPHIA, PA.

For Sale 100 acres level land, 40 mi. west of Phila. on Lincoln Highway, 2 miles station. Good land, good bldgs., plenty fruit, running water, all con. full par. Box 15, Sadsburyville, Pa.

Rich Michigan Farms Low prices. Easy terms. STAFFELD BROTHERS, 15 Merrill Building, Saginaw, Michigan.

Warranted to give satisfaction.

GOMBAULT'S CAUSTIC BALSAM
A safe, speedy and positive cure for
Curb, Splint, Sweeny, Capped Hock, Strained Tendons, Founder, Wind Puffs, and all lameness from Spavin, Ringbone and other bony tumors. Cures all skin diseases or Parasites, Thrush, Diphtheria. Removes all Bunches from Horses or Cattle.
As a HUMAN REMEDY for Rheumatism, Sprains, Sore Throat, etc., it is invaluable.
Every bottle of Caustic Balsam sold is Warranted to give satisfaction. Price $1.75 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars, testimonials, etc. Address
THE LAWRENCE-WILLIAMS COMPANY, Cleveland, Ohio.

Lump Jaw
The farmer's old reliable treatment for Lump Jaw in cattle.
Fleming's Actinoform
Sold for $2.60 (war tax paid) a bottle under a positive guarantee since 1896—your *money refunded if it fails*. Write today for FLEMING'S VEST-POCKET VETERINARY ADVISER A book of 197 pages and 67 illustrations. It is FREE. FLEMING BROS., Chemists, 253 Union Stock Yards, Chicago

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September litters. Thoroughbred stock. Orion Cherry King; Orion Defender; Taxpayer; Top Col., etc. Registered sow, fall farrowing $75. Write for free copy subscription magazine and free book, "How to Raise Hogs."
"THE RED HOG" ENFIELD-DRAKESIDE FARMS
Louis L. Drake, Owner. Delaware, N. J.

CRANDELL'S BIG TYPE O. I. C.'S
The World's Grand Champion herd, winning twice as many first prizes at the National O. I. C. Show as all other breeders put together. Calloway Edd being the Grand Champion boar. Also our herd has been undefeated at all the big fairs for the past two years. Stock of all ages for sale. Get our catalog. Crandell's Prize Hogs, Cass City, Mich.

HAMPSHIRES
The fast growing bacon hog. Pigs any age, bred gilts, free circular. LOCUST LAWN FARM, Bird-in-Hand, Box 2, Lanc. Co., Pa.

Fashion Herd of Big Type Poland Chinas Spring boars sired by Giant Smooth Wonder and Ohio King 2nd.out of 700 and 800 lb. sows, real herd-header prospects. A few sows bred for fall farrow. These offerings are real ones, the kind that are worth while. C. S. EPPLEY, ZANESVILLE, O.

REGISTERED DUROC-JERSEY PIGS
$10 each while they last, all from imported Southern stock, none better. Bargains in bred gilts, service boars, brood sows and spring pigs. C. W. Ellis, Jr., Maple Lawn Farm, Cortland, N. Y.

DUROC PIGS Bred for size and quality, 6 to 10 weeks old, $15 each.
R. ED. BARCLAY, R. D. No. 4, Somerset, Pa.

TARRYMOOR BERKSHIRES
Quality Growthiness Prolificacy
We guarantee satisfaction.
Robt. E. Atkinson, Wrightstown, Pa. Bell Phone.

REG. O. I. C.'S all ages. Booking orders for June pigs; Gilts bred for August farrow. BLACK DIAMOND MINORCA FARM, Mt. Bethel, Pa.

Reg. O. I. C. and C. W. Pigs. Bred gilts and sows Satisfaction and safe delivery guaranteed.
JOHN L. VAN HORN, TROY, PA.

Chester Whites Boar and Sow Pigs. Bred Sows. Collie dogs.
ARCADIA FARM, BOX D, BALLY, PA.

Service Boars. Several fine animals of the home-market and home-table breed, the Cheshire. Also 2 early Sept. litters of pigs. Morningside Farm, Sylvania, Pa.

REG. BERKSHIRE PIGS for sale. Sept., Oct. and November prices right. 4 gilts open; nice ones 100 to 140 pounds. W. J. McCONNELL, OXFORD, PA.

DUROC JERSEY MARCH SERVICE BOARS, July pigs, Colonial and Orion Cherry King breeding. Prices right. GEO. W. CRIM, Uhrichsville, Ohio.

CHESTER WHITE PIGS. None better. Eligible to registry. Write your wants. PENNCROFT FARM, CHAS. H. DARLINGTON, Phoenixville, Pa.

Registered O. I. C. Pigs 6 to 8 weeks old, good type, heavy bone. BRUBAKER BROS., STAR R., COCOLAMUS, PA.

Durocs, all im. Yearling and Fall yearling boar and Fall boars. Fall gilts, bred for Aug., Sept. and Oct. Spring pigs, e. sex. I. D. Jackson, R. 10, V. Wert, O.

Registered O. I. C. Pigs For Sale. Good stock and prices reasonable. L. D. LAUSHEY, Smoketown, Lanc. Co., Pa.

Veterinary

Conducted by W. C. Fair, V. S.

Advice thru this department is free to our subscribers. Each communication should state history and symptoms of the case in full; also the name and address of writer. Initials only will be published. We cannot make reply by mail. This is one of the most valuable columns of the paper and we invite readers to make use of it. Clippings from this column, when properly preserved and classified, make one of the most valuable medical symposiums a farmer-stockman can obtain.

Heaves.—We have a horse that is troubled with heaves and wish you would tell us what to give him. A. D., Boiling Springs, Pa.—Feed him no clover or dry, dusty, badly cured fodder of any kind; dampen his feed. Avoid feeding him much bulky food. Give hm 30 drops fluid extract nux vomica, one dram fluid extract of lobela, three drams Fowler's Solution at dose in ground feed 2 or 3 times a day.

Scurvy.—Several of our pigs have an unhealthy appearing skin, none of the body is raw, but the skin is dry and peels off in thin scales. I wish you would prescribe a remedy which is not very expensive. I forgot to say their color is white. R. W., Lawton, Pa.—Mix one part oxide of zinc in 9 parts white or light colored petrolatum and apply it to scurvy portion of the skin three times a week. One part coal-tar disinfectant and ten parts vaseline is another good remedy for such a skin ailment. Remember the pigs should be kept clean. If dirty, wash them with castile soap and water.

Foot Soreness; Sidebone.—I have a fine 5-year-old mare that comes out of stable some sore and stiff in the morning. She has been hauling stone, coal, and driver let them trot down hill with heavy load. When standing, she is inclined to point with one fore foot, and braces herself with hind legs. She has a small bony growth just above the hoof on right side, the size of a lead pencil about 1½ inches long. Will you tell in veterinary column what can be done for her? W. C., Ligonier, Pa. —Of course it is a mistake to drive fast down grade, if the load is heavy, especially if the road is not good. Apply equal parts tincture of iodine and camphorated oil to coronets of fore legs once a day. If fore feet are too hot, stand her in wet clay two hours daily. If it is possible you had better give her a rest, let her run in pasture lot day time and stable her nights.

Milk Fever; Dairy Question.—I have a cow that came fresh last March, six hours after calving she had light attack of milk fever, and recovered. Now, this same cow is due to freshen January 22, 1920. Is there much danger of her having another attack? If she has another attack is she likely to die? Our local veterinary pumped air into her bag, and it cured her. He claimed she was too fleshy. If this ailment can be prevented kindly tell me how? E. R., Bangor, Pa.—Milk fever is not now considered a fatal cattle ailment, but you should be equipped with a milk fever outfit, ready to promptly apply the air treatment, your veterinarian may not be available at short notice; therefore, you can do the work yourself. Having seen him apply this air treatment it is needless for me to tell you how, but let me emphasize the importance of cleanliness, for fear of infecting the udder. It is always a mistake to completely empty the udder of a cow until after she has been fresh three or four days. This has been proven too many times, since inflating an empty udder seems to be the remedy. Exercise before calving, keeping the bowels open and avoiding too high feeding is attended with good results. If your cow is a good one, as most victims of milk fever are, I advise you to keep her.

Indigestion.—I have 19 pigs, 11 weeks old; nearly all of them breathe too fast. I first noticed it 2 weeks ago. One had ring in nose, which I removed, but this is not the cause of other pigs breathing hard. I was feeding them barley and oats, but have now changed their feed. Six of the 19 seem to be ailing. I feed them some ear corn, tankage, middlings and milk. J. W., Centre Hall, Pa.—If you will rub their throats with camphorated oil once a day it will help them.

A Farm Home Health Heated
makes the long winters the most enjoyable period of the year. Your old farm house can be changed into a modern home in one day with our coal-saving, low priced, easily managed
LIFE-SAVER WROT IRON PIPELESS HEATER
Boiler riveting makes the Life Saver gas, smoke and soot tight forever. The rivets are 3-8 inches thick and driven cold under 30 tons pressure. Which do you prefer, battleship construction or plastered cup joints that are forever cracking, leaking gas, smoke and soot?
The Life Saver insures Health Heat—because it has ample provision for properly moistening the air. Your doctor will tell you that dry air is very hard upon the human system—it parches the membranes and is the one great prevailing cause of pulmonary diseases.
Life Saver Wrot iron plates are rust resisting and heat conducting—superior to either steel or cast iron. Our Health Heat booklet explains this fully and proves every claim by testimony of prominent medical and scientific authorities.
There is a furnace for every requirement in the Wrought Iron line—in twelve styles and seventy-nine sizes.
Donald B. Howard Heater Co.,
Des Moines, Iowa.

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Please send me your Health Heat booklet.
My house is....rooms....stories.
Ground size ....by........feet.
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Address ....
City ....State ....
Live dealers in open territory should write or wire us at once.

Dairy

SPOT FARM
HOLSTEINS
⅞ Holstein heifer calves $20 to $25 each express paid in lots of 5. 20 registered heifer calves. Registered bulls all ages. 25 close springer registered cows. 50 high grade yearling heifers and bulls $55 each. High grade 2 yr.-olds and close springer cows. Come to sale Oct. 14. Close to winter and must sell.
J. C. Reagan, Tully, N. Y.

STEVENS' HOLSTEIN FARM OF CORTLAND, N. Y.
King Korndyke Sadie Vale Jr., No. 20391, two nearest dams averaging 36 pounds of butter in 7 days, heads my herd. Butter records from 17 pounds two-year-olds to 34 pounds at full age. Also high grade Holstein calves, either sex, $20.00 each. Write your wants. PAUL H. STEVENS, Prop.

Purebred Registered
HOLSTEIN CATTLE
Send for FREE Illustrated Booklets
The Holstein-Friesian Association of America, Box 218, Brattleboro, Vt.

WE WILL GIVE THE USE OF A
Finely Bred Reg. Holstein Bull Calf
for three years to any responsible farmer who wishes to improve his herd. Nugget Hill Farm, Charlton, Mass.

HIGH GRADE HOLSTEIN CALVES. Either sex. Shipped anywhere. Write for prices. Satisfaction and safe delivery guaranteed. FRANK GAMEL, PINE GROVE FARM, LOCKE, N. Y.

Holstein Heifer Calves By pure bred sire and high-grade big producing cows. Beautifully marked. Splendid individuals, $20 up. Browncroft Farms, McGraw, N. Y.

Registered Holstein Friesian Cattle Sons of the great Fliderne Sir Valdessa, a 37 lb. bull, for sale. MILLARD E. BASEHOAR, Littlestown, Pa.

REGISTERED HOLSTEIN CALVES are all sold. Will offer you some more a little later. WALTER M. CRUTTENDEN, Wilkes-Barre, Pa.

Polled Holsteins registered with the horned ones, only naturally hornless. Catalogue for stamp. GEORGE E. STEVENSON & SONS, Clarks Summit, Pa.

Ayrshire Bull Calves From high record A. R. Dams
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400 Cortland County Cows For Sale 400

110	Fresh cows. Try a load of these if you want milk.
150	Cows due to calve this month and next. Good size and the best dairy type you ever saw.
70	Registered cows, fresh and due to calve soon.
10	Registered Bulls, with a lot of good breeding.
60	Heifers. They are extra high grades. Mostly due to calve this spring.

CORTLAND HOLSTEIN FARMS
Department OA, 203-205 Savings Bank Building
Bell Phone 534 CORTLAND, N. Y.

Holstein Bulls Ready For Service
Two are coming two years old, one three years. Better see these bulls; see the size and milking ability of dams and the remarkable calves the older one is getting. They have been raised under ideal conditions and are priced right. PLUMLYN FARM, Fairview Village (near Norristown), Pa.

Penncroft Saul, Reg. Jersey, dropped July 11, 1919. His daughters will excel their dams each year by more than his price. Don't buy other men's culls; raise better cows from your own best. Pedigree and price on application. CHARLES H. DARLINGTON, Phoenixville, Pa.

REGISTERED JERSEYS
A few bred heifers and service bulls.
AUSTIN LEONARD & SON, TROY, PA.

BUY A LIGHT-COLORED GRANDSON of the great King Korndyke Sadie Vale, from a good producing dam. Price, $50.
THE OAKS DAIRY FARM, WYALUSING, PA.

Registered Holstein and Guernsey bulls from calves to serviceable age. 250 animals in the herd. BONNYMEADS FARMS, R. D. 1, Harrisburg, Pa.

Milking Shorthorns Bull Calves sired by Glenside Royal Stamp for sale
C. M. KENNEDY & SONS, Ulster, Bradford Co., Pa.

HOLSTEIN BULLS Nearly ready for service. With all papers, $75 to $100. H. Smith & Son, Granville Summit, Pa.

Swine

REG. DUROC PIGS, large size, heavy boned. Booking orders for Fall pigs. Prices reasonable.
JOHN W. COX & SON, New Wilmington, Pa.

Berkshire Pigs Very best of breeding. Eight wks. old pigs, either sex, $12 each, inc. registry. R. S. GOOD, Peach Bottom, Pa.

Duroc Jersey Pigs Orion & Col. strains, 2 to 8 months old.
CHAS. E. ECROYD, Sunnyside Farm, Muncy, Pa.

Large Berkshire Swine Registered High Grade Prices reasonable. Write
HOME FARM, CENTER VALLEY, PA

Duroc-Jersey Fall Pigs at farmers' prices. Pedigreed and best of blood lines.
SLATY RIDGE FARM, Box 5, Palmyra, Pa.

BIG TYPE POLAND CHINAS—Boars and sows, 4 months old. Taking orders for Fall pigs. Prices reasonable. C. E. SECHLER, Markelton, Pa.

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SMASHING BARGAINS for The FALL of 1919

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HARRIS "Ready-Cut" Homes At Low Cost

This is a Harris Home No. KA-1018. 5 rooms and bath, beautiful design. Material shipped "Ready-Cut" under our improved Ready-Cut and bundling system. Erect it yourself. One of a hundred Harris Homes fully described in new FREE Edition Plan Book. Write for it.

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Buy NOW!

For a limited time only, we offer highest grade extra heavy 12 gauge barbed wire at less than the cost of manufacture; 4 point barbs ⅝ in. long, spaced 3 in. apart. Coated with best special weather resisting paint. Reels of 750 ft. weighing 68 lbs.

Special LOW Prices!

No. 2-KA100. Carload 625 reels, per reel	$1.80
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No. 2-KA102. 50 reels, per reel	2.00
No. 2-KA103. 25 reels, per reel	2.05
No. 2-KA104. Less than 25 reels, per reel	2.10

Watts Famous Corn Shellers

Now Sold Exclusively By Us

Complete $69.50

This is our Fall Announcement and your best chance to own a World's Famous Watts Corn Sheller in any size—small medium or large capacity. We offer them at Big Cut Prices under most liberal terms with a 60-Day Free Trial—guaranteed satisfaction.

Watts No. 1 Corn Sheller for the man who wants a corn sheller only for his own use. Capacity 50 to 75 bushels per hour with a 2 H. P. engine, now $34.50. Order No. KA900.

Watts No. 4 Corn Sheller with cleaning system, cob stacker and grain elevator, $69.50. Order No. KA901. No. 4 Sheller with cleaning system, cob stacker, grain elevator and automatic feeder, as illustrated, $89.50. Order No. KA902.

Watts No. 7 Corn Sheller with standard equipment including wagon box, grain elevator, cob stacker, type "R" feeder on steel trucks. Capacity 200 bushels per hour, now $255.00. Order No. KA903.

Watts No. 8 Double Cylinder Corn Sheller for custom work. With standard equipment, wagon box elevator, swivel cob stacker and feeder, horse hitch on steel trucks. Capacity 600 bushels per hour, now $290.00. Order No. KA905.

$69.50 now buys the Watts No. 4 Corn Sheller with cleaning system cob stacker and wagon box elevator.

Cleanly shells 75 to 125 bushels per hour with a 4 H. P. to 6 H. P. engine. Shells, cleans and loads all the corn. Stacks the cobs.

Buy on Your Own Terms

Write Today for Free Watts Corn Sheller Book No. KA77

Money Saving Roofing Offers!

Act Quick — Order Now
Quick Shipments

This is your big chance to buy prepared roofing, Steel Roofing and Siding at an unusual saving. But you must act quickly to get your share of these savings.

Now Is the Time—Order Direct from this "Ad"

Ajax high grade rubber surfaced roofing; put up 108 sq. ft. to the roll. Complete with nails and cement No. KA-302, 3-ply, per roll, $1.41. 2-ply, per roll, $1.31. 1-ply, per roll, $1.07.

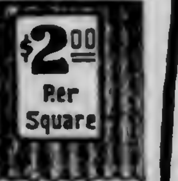
Rawhide stone faced Gold Metal Roofing, guaranteed 15 years. Rolls contain 108 sq. ft. nails and cement included No. KA-303, per roll, $2.20.

Buy NOW!

Our famous Rawhide Rubber Roofing, 3-ply guaranteed for 12 years, a high grade covering, rolls contain 108 sq. ft. nails and cement included, No. KA-304, 3-ply, per roll $1.83, 2-ply, per roll $1.63, 1-ply, per roll $1.33.

10,000 rolls of extra heavy high grade roofing; red or gray slate coated, rock faced, brown pebble coated, double sanded mineral or mica surfaced No. KA-305 per roll of 108 sq. ft. nails and cement included $1.93.

Corrugated Metal Roofing Sheets



28 guage painted 2½ in. corrugated overhauled siding sheets; 5 1-2 ft. long, KA-306 per 100 sq. ft. $2.00

26 guage painted 2½ in. corrugated overhauled roofing sheets No. KA-307 per 100 sq. ft. $2.75

24 guage extra heavy painted 2½ in. corrugated, overhauled sheets for roofing barns, granaries, etc. No. KA-308 per 100 sq. ft. $3.00.

Big Price Reductions on Cream Separators

Price Cut $2.00 to $11.00 Each.

Harris "Cream Getter" has made a remarkable record—not a single return — not a complaint The big increase in sales, manufacturing economies and a slight decline in cost of materials enables us to make big price reductions.

The same high quality "Cream Getter" with all exclusive patented improvements including the equal milk distributing sleeve now offered at reduced prices shown below. Write us without fail for illustrated literature with full explanation.

Order Number	Size Number	Capacity Per Hour	Reduced Prices
X27KA100	x1	x175 Pounds	x$34.80
X27KA200	x2	x250 Pounds	x 38.40
27KA300	3	375 Pounds	52.00
27KA500	5	500 Pounds	55.00
27KA700	7	750 Pounds	64.00
27KA900	9	950 Pounds	70.00

X indicates table sizes. Ready for shipment from Pennsylvania and Chicago Warehouses.

Liberal Time to Pay

Old Separators taken in exchange. 3% Discount for Cash in full with order.

FORD Radiators

ONLY $21.50 as built by Ford Motor Co.

KA1807. Latest Honeycombed pattern. Large water capacity and cooling surface. Finished in black Japan. For 1909 to 1916, 1917 and 1918 models, $21.50.

Mixed Nails 100-lb. Keg $3.45

In stock now new wire nails of all sizes from 3 to 40d. Put up in kegs of 100 lbs. All good quality at a saving to you. A handy assortment of nails for general use—plenty of each kind 100 lb. case, No. KA-68 $3.45

Guaranteed Ready-Mixed Paint

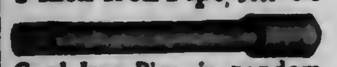
$2.54 Gal.

Our guaranteed House Paint of best formula, spreads farther, wears longer and costs less than any other paint at such a remarkable low price. White, black and 26 non-fading colors to choose from. No. KA-206. Put up in 1 gal. cans, 5 gal. kits and 50 gal. barrels.

Guaranteed Barn Paint

Guaranteed quality Barn Paint, a lasting preservative for everything about the farm; six colors. No. KA-207, per gal. $1.55.

1-Inch Iron Pipe, Per Foot 6c



Good Iron Pipe in random lengths, complete with couplings to all sizes are now offered at prices that save money. Suitable for the conveyance of water and all liquids. No. KA-204—1 inch, per foot 6c. No. KA-205—1 1-4 inch, per foot 9c.

Send for Catalog FREE!

MAIL COUPON

Harris Brothers Co.
Dept. KA-87 —Chicago, Ill.

Write in the lines below the articles on this page you are interested in and receive our Big Catalog FREE.

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Name ____________________ *Town* __________________

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BATHROOM OUTFIT COMPLETE $65

GUARANTEED "A" GRADE OUTFIT

No. SKA-326—Consists of white porcelain enameled bath tub, 5 ft. long and 30 in. wide. The tub is fitted with nickel-plated connected waste and overflow and nickel-plated double bath cock. The lavatory measures 18x21 inches, finished with white porcelain enamel, and is furnished with nickel-plated trap and nickel-plated compression faucets indexed for hot and cold water. The closet outfit includes a white vitreous earthenware wash down syphon action bowl and a highly finished golden oak tank, lined with heavy copper. Complete **$65.00**

One-Piece SINKS

Size 18x30 Inches $15.95

Size 20x36 Inches $16.95

White Porcelain Enameled one-piece roll rim sink and back; two nickel plated faucets and strainer; lead "p" trap. No. KA8520—20x36 in. $16.95. No. KA8530—18x30 in. $15.95.

Complete with Fittings

INDOOR TOILET

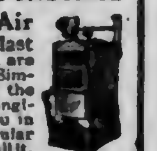
$9.95

Improved chemical indoor closet, fitted with regular shaped closet seat and cover, finished in birch, mahogany. Cast metal frame and base, steel casing enameled in azure blue, complete with exhaust pipe and chemical, ready to install. No. KA 1818, each $9.95

Complete Heating Plants at Big Savings!

EASY AND ECONOMICAL TO INSTALL

Hot Water, Steam and Warm Air heating systems, guaranteed to the last fitting, high grade and thoroughly efficient, are offered by us now at unusually low prices. Simply send us a rough sketch of the layout of the rooms in your home. Let our experienced engineers relieve you of all worry and assist you in deciding upon the best plant for your particular building and the most economical way to install it.

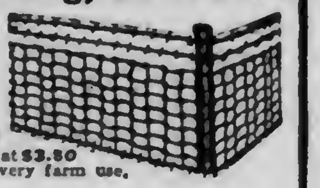


7 H. P. Stickney Gas Engines

Powerful, Durable, Economical $125.00

We are now prepared to make quick delivery on this celebrated high-grade, guaranteed, perfect gasoline engine in 7 H. P. size. Thousands of Stickney Engines in successful operation. Take advantage of this opportunity to buy this famous Gas Engine at a money-saving price. Friction Clutch Pulley $15.00 extra.

Barbed Hog Fencing, 26c Per Rod



Special barbed bottom galvanized fencing. Made of No. 11 top wire and No. 14 intermediate line and stay wires. Stays spread 6 inches apart. **KA-209,** 26 inches, per rod 26c. **KA-210,** 32 inches, per rod 30½c.

Galvanized Wire, 100 lbs. $3.50

Galvanized Wire Shorts, 8 to 14 gauge at $3.50 per 100 lbs. and up. Suitable for every farm use, put up in 100 lbs. **KA-907.**

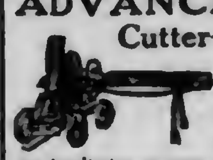
ROBINSON HAY BALER

$225

Here is your chance to get the best Hay Baler made at a tremendous saving. Biggest capacity; built to run from large tractor or a small gas engine.

KA 215, 16 x 18, Junior	$225
KA 216, 16 x 18, Standard	260
KA 217, 17 x 22, Standard	275
Automatic Feeders for Balers	175

ADVANCE Ensilage Cutter—High Grade



$175

This low price offer is your opportunity to save money on a high grade ensilage cutter. A 15-in. machine. Capacity 15 to 20 tons per hour. Furnished with blower pipe for 30 ft. silo, mounted on Horse Hitch Steel Truck. Complete outfit, No. KA-741 . . . . . . $175.00

Hercules NON-TIP Hog Troughs

5 Ft. Long Each

Special Bargain $1.95

Low prices for quick sales. Made of heavy galvanized iron (about 10 gauge) Non-Tip flared legs. Sanitary and durable —money savers.

5 ft. length, each **$1.95;** 8 ft., **$2.95;** 10 ft., **$3.95.** In lots of 3, 10c less each—in lots of 6, 20c less — in lots of 12, 30c less. **No. 14-KA-512.**

HARRIS BROTHERS CO., 35th and Iron Sts., CHICAGO

PENNSYLVANIA FARMER

AGRICULTURE
THE KEYSTONE OF
NATIONAL PROSPERITY

ESTABLISHED 1880

PUBLISHED WEEKLY

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Volume 46 PHILADELPHIA, PA., SATURDAY OCTOBER 18, 1919. Number 16

A delightful showing of new Fall Furniture

OAK, birch, mahogany, walnut — upholstered furniture—period furniture—all the most approved designs for Parlor, Library, Dining Room, Bedroom and Kitchen. See the amazing variety—the beautiful designs on pages 204, 778 to 840 of your new Charles William catalog.

(The big rocker in the picture sells for only $18.45, in high grade imitation black leather. The Golden Oak writing desk and book cabinet—$16.85. The Colonial table—$14.65. The table lamp, mahogany finish with rose, gold or blue silk shade—$7.85. Hundreds of other values like these in the catalog.)

Parlor suites....$25.95 to $157.95
(See catalog, pages 778 to 781)
Couches.........$4.45 to $42.60
(Pages 782-783, 823, 828)
Rockers........$1.70 to $42.65
(Pages 778-781, 784-790)
Floor Lamps....$13.65 to $23.35
(Pages 659, 788)
China Cabinets..$18.35 to $50.40
(Pages 791-794)
Buffets..........$18.30 to $63.35
(Pages 792 to 795)
Dining room tables $6.85 to $44.45
(Pages 792-794, 796-797)
Dining room chairs $1.68 to $6.85
(Pages 792-794, 798-799)
Writing Desks....$3.98 to $39.85
(Pages 677, 808-809)
Dressers........$16.95 to $54.35
(Pages 810-816)
Beds............$5.25 to $51.85
(Pages 810-813, 816, 819-821)

Portieres and Curtains

Beautiful new rope, tapestry and cross stripe portieres—lovely materials for making your own draperies — curtains of every kind for window, door or panel are shown on pages 710 to 723 of your new catalog.

(The draperies pictured here, in silk cross stripe effect, sell at $3.50 per pair. The Marie Antoinette curtains at the window—$4.50 per pair.)

A talk with our furniture store manager

"OUR new line of furniture this fall," says our furniture specialist, "is really remarkable from every viewpoint, *style—serviceability—variety—price.*

"The absolutely good style and large variety are what every customer rightly expects when ordering from New York, and I personally inspected the factories to insure the Charles William standard of serviceability.

"As for the price situation, with hard woods still scarce and wages still on the increase, the wise buyer will purchase furniture RIGHT NOW before prices advance still further.

"Fortunately I bought heavily at the lowest market quotations, so that the prices on our beautiful furniture display in the new Fall Catalog are the very lowest that the present market offers."

Rugs and Carpets

148 beautiful designs from which to select your new rugs! Among these beautiful colorings and lovely designs, you will find exactly the style and the colors to fit harmoniously into your home. And the low prices, you may never be able to duplicate again for years.

Axminster, Velvet, Tapestry Brussels, Oriental, Persian, Grecian and Chinese designs, Fringed Wilton velvet, wool and fiber, Japanese mattings, rag rugs. Fiber mattings, carpets, inlaid linoleum. They fill pages 724 to 740 of the new catalog.

Special!
Free Book of Wall Paper Bargains

We are selling out a number of beautiful wallpapers for all rooms at amazingly low prices. With prices going up, it will pay you to put in a supply whether you paper now or in the Spring. Send at once for this *free* wallpaper book of 98 actual samples. Address The Charles William Stores, 560 Stores Bldg., Dept. W, New York City.

This Axminster rug — a beautiful Oriental pattern—comes in two sizes.
8¼ x 10½ $29.50
9 x 12 34.75

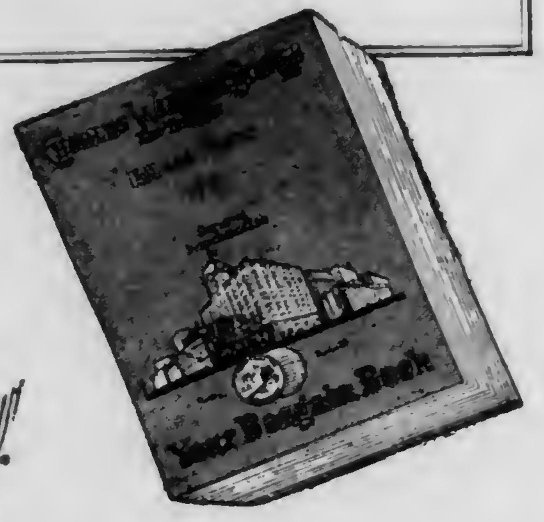
Next is a seamless tapestry Brussels rug, with a lovely floral design, in three sizes
6 x 9 $14.95
8¼ x 10½ 25.50
9 x 12 27.50

The bottom rug is an Axminster in a most attractive Oriental design, three sizes
6 x 9 $17.70
9 x 12 38.50
11¼ x 12 49.50

See pages 724 to 740 of your Bargain Book.

Dishes

The charming 42-piece Porcelain dinner set, with dainty floral design, shown below, sells for only $7.25. Colonial initial sets, floral and leaf, medallion, gold lines, Scotch Thistle, Blue Willow, and many other patterns in the catalog pages, 641 to 652.



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PENNSYLVANIA FARMER
AGRICULTURE THE KEYSTONE OF NATIONAL PROSPERITY
ESTABLISHED 1880 PUBLISHED WEEKLY

The Lawrence
Publishing Company
Philadelphia

Vol. 46—No. 16. PHILADELPHIA, PA., SATURDAY, OCTOBER 18, 1919. 75 Cents per Year

Buying Cavalry Horses for the Army

The Qualifications Sought and Some Tricks of Dealers

By LIEUT. GEO. H. CONN

V. C. U. S. A.

"Head should be symmetrical and well set on the neck; ears small, thin, neat and erect; forehead broad and full; eyes large, prominent and mild; lips thin and firmly compressed; branches of underjaw wide apart."

This is a word-picture of a horse's head that Uncle Sam has prepared to guide those who buy horses for his army. But that is not nearly all, for that is but a small part of the horse, and no more important than some of the others. Let me enumerate:

Neck.—Light, moderately long, and tapering toward the head, with crest firm, and longer than underside; mane and forelock fine and intact.

Withers.—Elevated, not unduly fine, well developed and muscled.

Shoulders.—Long, oblique and well muscled.

Chest.—Full, very deep, moderately broad, and plump in front.

Forelegs.—Vertical as viewed from the front and side, and properly placed; with elbow large, long, prominent, and clear of chest; forearm large at the elbow, long and heavily muscled.

Knees.—Neatly outlined, large prominent, wide in front, well situated, and well directed.

Back.—Short, straight, and well muscled.

Loins.—Broad, straight, very short, and muscular.

Barrel.—Large, increasing in size toward flanks, with ribs well arched and definitely separated.

Hind Quarters.—Wide, thick, very long, full, heavily muscled, rounded externally, and well directed.

Stifle.—Well defined, prominent, and well supported by muscles of that region.

Tail.—Fine and intact; well carried and firm.

Hocks.—Neatly outlined, lean, large, wide from front to rear, well situated, and well directed.

Limbs.—From knees and hocks downward, verticle, short, flat, wide laterally, with tendons and ligaments standing well out from the bone and distinctly defined.

Pasterns.—Strong, medium length, not too oblique, and well directed.

Feet.—Medium size, circular in shape, sound; with horn smooth and of fine texture; sole moderately concave, and frog well developed, sound, firm, large, elastic and healthy.

A Coach Mare and Her Six Colts Owned by Phares Eberly, Lebanon Co.

From among thousands of animals presented to those officers who select animals for the United States army, there will no doubt be a few horses that would fit the description given above fairly accurately; many that possessed a conformation that could be described by the greater part of this description; but surely NOT ONE that answered precisely to the description—for that would indeed be a perfect horse. Nowhere but among the finest type of show animals could one expect to find a horse that would very closely simulate the description given above; but for all that, it was a good policy to judge all horses as much as possible from the standard of a perfect individual.

In addition to the above description, the cavalry horse must stand from 15 to 16 hands in height, weigh from 950 to 1,200 pounds, trot squarely, and ride well under saddle. He may be any color except white and gray, and must not have the pacing gait. He must be strong and have a constitution that will enable him to withstand much hardship. The cavalry horse must be a good feeder, able to rustle for his own feed, and to go many miles during forced marches without food and water. He must also be between 6 and 10 years of age. Not more than 15 percent of mares were bought at any time.

New Jersey Farm Sale of Horses to be Replaced by Trucks

A few years ago the plains in the western states were teeming with large herds of small ponies, that we knew as bronchos. They were very hardy, but small in height, light in weight, and very wild, as many of these herds were not accustomed to even being herded. During the past few years draft stallions were crossed on these native mares, and a small, chunky pony was the result. For this reason many of the horses that came from these sections were rejected due to the fact that they were too light in weight and too low in height. Age was another common cause for rejection; usually, the horse was over, rather than under age.

Animals offered as cavalry mounts were rejected, because of unsoundness, blemishes, faulty conformation, height, weight, habits and vices. Animals with side bones, ringbones, splints, quarter-cracks, contracted feet, droped sole, spavins, curbs and bowed tendons were rejected. Horses with long, slender neecks, and long, slim bodies, were rejected, as they are poor feeders and do not recover from sickness or hardships like a more compact horse. Those with flat, narrow chests show a weakness of constitution. Those that are faulty gaited, due to bad conformation of feet and legs, cannot be used for the reason that the cavalry horses must be able to do hard, fast work without injury to themselves. Horses with high withers get sore backs from the saddle. Those with bad habits and stable vices are dangerous, and are detrimental to the service, so were not purchased.

Type of Cavalry Horse in United States Army

Strictly speaking, there is not and cannot possibly be any particular "type" of cavalry horse predominant in the United States cavalry at this time—and, no doubt, not for years to come—for these reasons:

No one has been breeding horses for this class of work, nor with the thought in mind of producing animals strictly of the type we want for the United States army, and there is no one type of animals produced in any one section that could possibly supply the demands of the army. The emergency that we have just passed thru made it necessary for us to get cavalry mounts from every available source, and these are the sources from which they came: From the small, cross-bred Percheron horses that are found in the west, and on many of the farms of the central states, most of them from lightweight mares. Most of these were much of the type for light artillery, but too light in weight, so they were purchased for cavalry. They were, many of them, heavy headed, coarse, and heavy jawed, stubby and short-gaited trotters, but they were strong and had a good constitution, were good "rustlers," and well able to take care of themselves under unusual circumstances, and keep in good flesh. They were able to carry a great amount of weight.

Another source of our purchases was from among the standard-bred, or harness horses. Those that were not speedy enough to race, and those that would not sell for fancy prices to the city trade, and those that were replaced in the country by the automobile, were sold for cavalry mounts. Still another source of a few of them was from those thorobreds who were unsuitable for racing. It would be folly however, to even think that this country could supply enough of the standard-bred or thorobred horses to equip an army like ours with cavalry mounts

When the war started, England, France, Belgium and Italy found it necessary to get large numbers of horses very quickly. Their buyers came to our large markets and bought great numbers of horses, and as they were greatly in need of them, they were very lenient as to age, conformation and soundness and many horsemen profited enormously. When the United States found it necessary to buy animals for the army, they thought that we should be lenient too, and when they found out that we were not going to be so, several of them resorted to many tricks in an effort to sell undesirable horses to the purchasing boards. The following are some of the most common practices:

The Age of the Horse

We often find a horse that is much older than the limit that has had his teeth tampered with; we determine the age of the horse by teeth. Some men will take an old horse and by the use of some drills, gouges, punches and the like, attempt to make the teeth resemble those of a much younger horse. We have recognized a great number of teeth that have been tampered with in this way; it is known as "bishoping."

Another common practice is to take a hammer and punch, and knock out the last two incisor milk teeth (which are retained until the horse is five years old), at about the age of four and one-half years, and in three months or more the permanent teeth appear. To one who is not extremely well versed in "ageing" horses, a few of these may be accepted as six years old.

Concealing Bad Eyes

One of the hardest things to determine, and one of the most essential, is good eye-sight. You know quite well that every object in given positions is reflected in the eye of the horse, so it is a common practice for one of the men who leads the animals, to stand so that the image of his shirt or jacket is reflected in the horse's eye, especially if there happens to be a spot or a speck in the eye, this may hide it so that it will not be noticeable.

Horses that are blind in one eye, but have a clear or sometimes what we call a "blue eye," are very hard to detect on a dark, cloudy day and to make it all the more difficult, they usually show these on a dark day. Maybe they will put some foreign substance in the eye so that it will be watering profusely and will be kept partly closed. This makes it extremely hard, as on first thought one is led to believe that the animal is just suffering from a foreign substance in the eye, or from an injury to it.

Atrophy of the Shoulder

This condition is commonly known as "sweeny," and is due to an injury of the nerve caused by pressure of an ill fitting collar. The large muscles of the shoulder waste away and leave a large hollow space there. Some dealers have used a large needle and a pump and filled them full of air so that they would appear normal.

Sores on Head, Neck and Withers

Horses are quite often affected with fistulas or running sores at the top of the head and withers. It has been the practice of some dealers when finding one of these that was not discharging much pus to clean them up well and dry the hair and then hide them with the mane when possible. We have found "sitfasts" (which are the worst forms of sore neck), covered with an antiseptic powder, hiding it completely and leading us to believe that it was just galled.

"Over" in the Knees

Some horses, due to a weakness of the tendons and ligaments of the fore-leg stand with the knees slightly flexed, and we say that they are "buck-kneed." Some dealers will lead this kind out, and by pushing the horse backward just as hard as possible with out overbalancing him, will make him stand much straighter than usual. We find other horses that stand with their knees back the same as a calf, and call them "calf-kneed." The leader, by pulling forward on the horse, will greatly correct this faulty conformation, while the animal is being inspected by the examiners.

Defects of the Feet

Many cases of thrush and dropped sole are hidden by dirt and manure in the shoe. You nearly always find these animals shod, and if you do not take a hoof pick and clean out the feet, you may have a bad-footed one. A dirty hoof will occasionally hide a quarter-crack. Beneath a small cut you may often find a nice little side-bone.

Spavins and Curbs

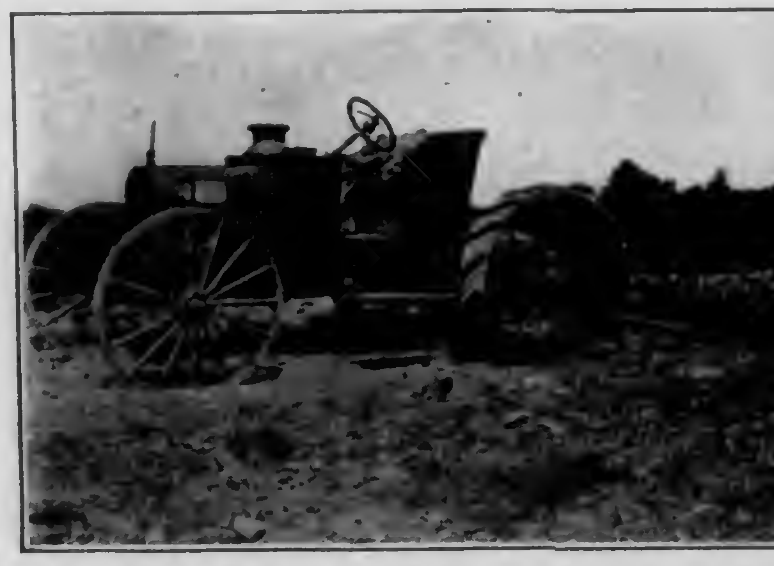
When these are very small and not making the horse lame, we do by careful observations find several of them that have had the hair either carefully shaved or singed off from them. This, in many instances, will make them unobserable to all save a very careful examiner. When these blemishes are on the limb only and quite noticeable, it is a common practice to make a fresh wound on the most prominent part of the blemish, trying to make it appear as an acute injury; or, occasionally the other leg is purposely bruised by some hard object, making a similar swelling in an effort to escape detection of the blemish.

A Plank Drag Makes Soil Fine, Smooth and Firm

Warming Up String-Halted Horses

This is a condition in which the muscles of the hind leg contract so forcibly that the feet are brought higher above the ground than usual. It is a common method among some horsemen to take these horses and walk them slowly until the muscles are relieved of the cramp, and many of them will then appear sound. The trouble recurs as soon as the horse becomes cool again.

Horses that have been in the large markets a few days are usually found to be suffering from influenza, and will have a nasty, dirty discharge from the nose and eyes. We find many of these horses that have had the nostrils and eyes dried by wiping them well and then coated with a white ointment, simply to hide the fact that they were already sick.



A Home-Made Tractor Made by a Pennsylvania Farmer

Making the Lame Ones Go Sound

A very common trick is the use of a local anaesthetic to make a lame horse go sound. Cocaine is usually used. The horse walks, trots and gallops all right when you buy him, but on the morrow he goes lame, and, of course, some innocent horse gets the credit of kicking him.

Yet, with all that the purchasing boards for the United States army had to contend with in an effort to get good ones, the number of animals accepted that were unfit for the service at the time of purchase was less than 1 percent. After several months in the remount depots, where many of them went thru severe sicknesses and where many others were injured, still, when the armistice was signed there was less than 5 percent of the animals owned by the United States army that were rejected as being unfit for service. A truly remarkable record for the men who had the remount work under their control.

A HOME-MADE TRACTOR

The accompanying illustration is of a tractor I made last winter. The car and attachments were purchased second handed. I put ordinary wagon wheels in the front hubs, removed two leaves from each spring, and placed a milk can in position to serve for an extra cooling tank. A small tank of gasoline serves for starting the car, after which I use a mixture of equal parts of kerosene and gasoline which works well and proves quite economical. Two and one half quarts of gasoline and kerosene mixture will furnish power for handling a three section spring tooth harrow one hour on level ground. The machine will do the work of three horses, and on real level land will handle a four section spring tooth harrow in good shape. The economy in fuel is surprising, and the purchase of a few new parts gave me a rig that stood up well and proved practical in every way.—H. A. Van Kuzen.

THE USE OF THE PLANK DRAG

The use of the plank drag as a clod crusher and soil leveler has been common in some sections, yet in others it is an unknown implement. Yet, when the amount and kind of work a drag will do is compared to the cheapness and ease with which one can be made, it is hard for the person, who has used one, to understand why they are not in use on every farm.

It is far better than a roller for leveling the soil and crushing hard lumps. The only place wherein the roller excells, being for leveling down the stalks after seeding the oats ground, or for remedying frost heaving in the clover field in the spring. One of the best places that a plank drag can be used is directly following the plow when preparing for the fall seeding. At this time the soil is usually hard and lumpy, and lacking in moisture. By hooking to the drag at the end of each afternoon and covering the soil plowed that day, the lumps are readily crushed while they are still moist, the soil is easily leveled and the amount of surface area is decreased so that the evaporation is lowered. Besides holding the moisture in the soil thru decreasing the surface area, the plank drag, unlike the roller, leaves the surface in a mellow condition that is similar to a dust mulch. In the spring when the soil is commonly filled with moisture, it is best not to use the drag until ready to start harrowing, as a crust will sometimes form on the soil if dragged directly following the plow.

A plank drag is very easily made out of almost any material and in any size desired. We have one made out of three 3x10 oak planks, eight feet long, that is very satisfactory, altho a three-horse load. Some use lighter material and make the drag longer, which serves just as well, except where the soil is very rough or hard. Some people hitch the drag so that the first plank slants up like a sled runner, yet a much more efficient leveling implement is made if the planks are run so that they slant into, instead of out of the soil.—C. Randolph Kahler, Lycoming Co., Pa.

DRIVE FOR BETTER STOCK IN DELAWARE

Delaware was the second state in the Union to enroll officially as a supporter of the "Better Sires—Better Stock" campaign of the United States Department of Agriculture, in co-operation with the State Agricultural Colleges and other agencies. This campaign for better stock which begun October 1, is arousing keen interest thruout the country. Uncle Sam will keep records of the animals by kind, breed, sex and blood lines of each farmer who enrolls. These lists will be kept by states and counties so that there will be readily available a record of the breeding stock belonging to farmers who have been granted the official emblems of the better sires movement.

FALLACIES ABOUT SOIL TESTS

What a Chemical Analysis of Soil Will And Will Not Show

The following editorial taken from a daily paper published in a small city but having a rural circulation of about two thousand copies is a fair sample of the misfortune that farmers have doled out to them by the well-meaning city editors:

Oil Tests a Good Thing

The farmer who does not know his soil as the student knows his book is a foolish man. Upon the soil he must depend for the reward for all his back-breaking toil. He may plow and plant and tend; weather conditions may be unusually favorable; but if his soil is poor or unsuited to his crop his efforts will fail or prosper so feebly that he will reap discouragement.

"In these days of science no farmer need run this risk no matter where he lives or how poor he may be. He can send samples of his various soils to the agricultural department of his state, where they will be carefully analyzed, and he will be informed as to what they contain and what they lack, what fertilizer is required and the best way to produce and use it."

We are all agreed that the farmer should know his soil but the problem is too complex for him to know it by the short-cut of soil analysis. He must know it by long continued cropping with many kinds of crops and by testing with different forms of fertilizers.

Soil Analysis Insufficient

Many persons have argued that the chemist should be able to tell what there is in a soil just as he can tell what there is in a sample of ore. In a measure this is true but the difficulty is that the soil analysis does not measure the soil fertility. In the first place soils are so variable, even on a single farm, that it is very difficult to get representative samples, analyses of which will show a fair average for the entire farm. Many farms have half a dozen different types of soil. Even if the difficulty of getting a representative sample, or group of samples, is overcome the analyses do not show what the plant can get out of the soil. The chemist usually determines the portion soluble in strong acid, what is soluble in water and what is soluble in a weak solvent that is supposed to act in a similar way to the soil water. The difficulties are that the strong acid, used by the chemist, brings much larger amounts of the plant food element into solution than are ever available to our crops. For example most sandy soils contain large quantities of potash and yet very little of this potash is available to our crops. On the other hand analyzing the portion of the soil soluble in water does not tell the whole story because the water which the chemist uses is nearly or quite pure, while the water of the soil is slightly acid. The amount of water soluble material the chemist finds in the soil does not show what is available to the crops. Chemists have for years been studying the question of a solvent for use in soil analyses that would have about the same effect as the soil water. In analyzing fertilizers a weak solution of citrate of ammonia has been used to dissolve certain materials after the water soluble portion was determined.

This applies especially to the determination of phosphoric acid in phosphate fertilizers. Yet the chemist will tell you this is only an approximation. He knows that some crops may be able to get less from the fertilizer than what the analysis shows as "available." He knows too that some of the so-called gross feeders, such as corn, will often use more than what the laboratory analysis shows to be "available."

Furthermore the quantities of plant food that actually become available to our crops vary widely in different soils and in different seasons. The soil is a very active place. It is both a chemical and a bacteriological laboratory. The chemical activities depend mainly on the amounts of organic matter and the amounts of lime present in the soil. No two soils are alike in regard to these materials. In fact there will be wide variation in the amounts of lime and organic matter in different portions of a single field.

Then again the amount of plant food that becomes available in any one season depends much on the water movements in the soil. If there is a surplus of water plants will not make a normal growth. If there is too little water present our crops may not be able to get the necessary plant food to keep up a normal growth, altho the elements might be available except for lack of water.

The soil abounds in bacterial life. Some of these bacteria help to make plant food available and some do not. If the conditions are favorable for the growth of those bacteria which are useful in making available certain elements of plant food our crops are almost sure to thrive but this is something the work of the chemist tells nothing about.

The facts are that a working knowledge of soil problems demand a knowledge not only of chemistry but of bacteriology and physics as well. While the farmer often does not claim a knowledge of these subjects he is putting their teachings into practical application on his farm every season.

A Rustic Gateway In Proper Surroundings is Attractive

About all that the chemist can do by soil analysis that will be of much practical value to the farmer is to tell him if his soil is lacking in any one of the essential elements of plant food. Some soils do not contain enough phosphoric acid or of lime so that the amounts that will normally be made available by nature will meet the full requirements of our crops. In one section in Illinois the farmers found that crops would not grow and develop normally on a certain type of soil. They called in the chemist of the State College and he found that the soil was nearly devoid of potash. When potash in an available form was added to this soil, without the addition of other forms of plant food, these farmers were able to produce good crops. But this was an unusual case. The area was evidently an old lake bottom and the soil had for ages been water-soaked, until practically all of the available potash had been taken out of the soil.

Field Tests With Fertilizers

The fact that our agricultural experiment stations have for years been studying, by means of field tests with fertilizers, the problems of plant growth shows that the leading agricultural investigators no longer rely mainly on the chemist to solve soil problems. The growing plant is the best agency thru which to solve problems of soil fertility. It may be necessary to have a broad knowledge of chemistry to work out these problems to best advantage but the chemist can work better thru the help of the living plant than by relying wholly on the laboratory reagents.

What can the farmer do then toward learning something about his soil needs? He can do just what many of the more progressive farmers are now doing. He can study the results of the field tests with fertilizers on different crops, as carried out by the colleges and the experiment stations. He can then simplify these tests and apply them on his own soil. If his soil is lacking in lime, a very simply test of applying lime on certain areas and leaving other areas with none he can easily determine whether lime does any good or not on his soil. If he thinks that acid phosphate might increase the growth of grain in paying quantities, he can easily determine the fact by using acid phosphate on a certain area and by harvesting and threshing the grain on this area separate from the rest of the crop.

If he is still more inclined to know his soil and the needs of his crops, he can lay out a small area where he can test out a rotation of crops with different fertilizer chemicals. In this way he can ascertain whether nitrogen, phosphoric acid, potash or lime does the most good on the various crops grown.

The farmer who is constantly studing his soils and his crops and who is willing to experiment and test out new ideas under his own local conditions will get ahead much faster than the man who relies on the chemist to "tell him all things" about his soils.—C. S. Phelps.

FARMER CO-OPERATIVE TRUCKING SOCIETIES

The farmer with the limited income cannot always afford a motor truck, for unless a truck can be kept fairly busy, the investment cannot be a profitable one. Fortunately, however, in most cases there are others in a neighborhood who are similarly situated, and by joining together in a farmers co-operation society, a solution to the marketing problem is often arrived at.

One of the many typical examples of this arrangement is the motor truck route operated between Belair and Baltimore, Md., a distance of thirty miles one way, two motor trucks making the round trip daily. The business has been financed thru a club formed by Harford County residents along the route, 200 shares having been sold at $25 per share.

Machinery and supplies are hauled to the farmers on the return trip at twelve to fifteen cents per hundred weight. Milk and cream are hauled daily to Baltimore and delivered to six dairies, while poultry and other farm produce are marketed with commission dealers and other wholesale firms.

The club guarantees safe transportation to its members, compensation being made for all losses. The rates are reasonable and the farmer is relieved of all loss of produce thru his inability to get it to market and all loss in time in getting it there.

Besides these advantages, the secretary of the club is a sort of general utility purchasing agent for the members. If a farmer breaks a part of his binder, for instance, it is only necessary to call the secretary, who secures a duplicate part in the city and sends it out on the next truck. Such a co-operative arrangement is a compliment to the intelligence and ingenunity of the American farmer, but if logically followed, will aid materially in the nation-wide fight to reduce food prices.

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Our job is to serve our readers. Whenever and wherever we can help you, write us.—The Editors.

Keep Sane

FROM inquiries received and by conversation with farmers it would seem that a few at least have become somewhat alarmed about the future by the scare headlines and wild prophesies which frequently appear in the daily papers. To all such we would say, be not afraid. A great deal that is now being published about possible future calamities is merely the product of loose imaginations, and some of it is pure, political bunk. There are big and important questions to solve, but there are also big minds in all classes that will be equal to solving them. There is absolutely no grounds for farmers to fear to go ahead with full force. The products of the farm are among the scarce necessities of the race the world over, and they must be supplied first and most continuously. The farmer who "carries on," heedless of the timid souls and false prophets, using the best methods and good judgment, has nothing to fear from the future. Of all classes, farmers should be the last to be caught in an epidemic of "brain-storm."

Selling Surplus Bulls

MANY beginners in breeding registered dairy cattle have become discouraged because they failed to find a profitable outlet for the surplus bull calves. The new breeder must frankly be told not to bank on every bull calf as a liquid asset. In the first place calving seasons are sure to produce a large percentage of male calves that are unfit to develop or sell for breeding purposes, either for use in pure bred or grade herds. The policy of accepting all pure bred males as worthy of preservation in the breeding ranks has been a distinct stumbling-block to breed progress, or dairy improvement; besides the culling process can be practiced with less cost during the formative period of herd development than at any future period.

In the second place men who are looking for high class bulls invariably go to some breeder who has an established reputation and who has animals that have been bred along certain lines until their powers of prepotency have become more or less fixed.

Of course, the new breeder who attempts no violent outcrosses and develops a few high producing cows can find a ready market for his bull calves on the strength of the records made by their dams. This is, after all, the only safe course for the beginner to follow, inasmuch, as it frequently happens that some cow, a close relative of some cow in his herd, makes a phenomenal record. Then he is in a position to capitalize on such a record when it becomes public, provided he has continued his breeding operations along the same lines that produced the record making cow. As a rule the beginner in breeding pure bred dairy cattle has everything to lose and nothing to gain by putting new ideas of his own into developing new lines of blood in his herd before he has become thoroly familiar with handling the tools with which he is carving out improved forms of animal life.

Keep Comfortable

WHILE there is now no grounds to fear a return of the "flu" this fall, still it is always the part of wisdom to provide enough heat in the living rooms to make them comfortable in the fall. Too often the family is compelled to shiver around in mornings and evenings because it is not yet cold enough to start regular fires, with the result that winter is begun with colds, thus lowering the vitality and inviting more serious troubles. Homes provided with fireplaces, or where natural or artificial gas is available, the question is easily solved, but the majority of homes have only coal or wood-burning equipment and the high cost of fuel will tempt many to economize, often to their sorrow. For these latter homes there is no more satisfactory, cheap method of taking the chill off a room than by using a modern, oil-burning heater. They are easily moved about and will quickly raise the temperature of the room several degrees. It is much easier and cheaper to prevent disease than to cure it.

Bring The Bodies Back

THE following extract from a letter written by a farm mother whose only boy was killed in France no doubt expresses the sentiment of every American mother who experienced a like loss:

> "I want to ask a favor. Will you, thru your valuable paper, say all you can in favor of having the sacrificed bodies of our dear boys brought back to their homeland and loved ones? Isn't it enough that they cheerfully went to a foreign country, without being kept there against the wishes of their families? We have been told by the government that their bodies would be sent, but there are so many doubts about it that the uncertainty nearly breaks our hearts. A greater sorrow than that the body of our boy should not be brought home could not come to us."

We can only say by way of reassurance that we believe that all the located and identified bodies will be brought home in due time. This will take time because of the many other pressing things that must be done in closing up the war, many of which are vitally necessary to the welfare and comfort of the living, and we would counsel patience, hard as it may be to wait. On the other hand, we would urge all who have no such personal feelings in the matter as has this mother—those who experienced no such loss—to make no objection to this movement, but to urge its speedy accomplishment. The expense involved should not weigh against an action that would bring the only comfort that can come to a hundred thousand American mothers.

"Come, Let Us Reason Together"

THERE never was a time when so many people were divided into so many factions, or needed more to heed this Biblical injunction than just now. After the unsettling experiences of the past five years, in which the human mind worked under abnormal stress, it is probably but natural that the period of extreme sacrifice should be followed by a period of extreme selfishness. The only way to bring the warring factions of humanity back to a normal, harmonious conditions is for them to set down and reason together. All talk of the use of force, strikes, lockouts and other extreme measures by one faction to control another is foolish. A frank discussion of the question involved by all the parties interested is the only way by which harmonious relations can be established. The industrial conference now in session in Washington is organized upon the right plan. Great good may be achieved by it, provided all parties play fair and take part in an honest endeavor to reach a common understanding of the problems involved. One thing it should not become, and that is a meeting devoted to fault-finding and incriminations. The conduct of the opening sessions has been reassuring, and the only weakness apparent lies in the unorganized state of those representing the public, as against the team work of labor, and also of capital representatives. There is a great opportunity here for the representatives of agriculture to exhibit the level-headedness and fair mindedness of farmers in a crises, and to set right some false impressions created by radical, would-be leaders of farm organizations.

Come; let us reason together.

Your Best Investment

FEW of us realize how many things investments represent. We are prone to look upon good investments as just things for which money is expended so that it will go on increasing from year to year. It is true that an investment should be depended upon to produce profitable returns, but unless these returns produce happiness or satisfy a want the investment is not likely to be profitable. We should beware of investments where financial gain is the supreme passion of the mind. It is well to mention these things because in these strenuous times so many of us seem to forget what life is for. Life is for living. Sometimes investments in enjoyment are more profitable than investments in things. Is it not more than probable that investments that will develop living on the farm to near what it ought to be would make us have so much more interest in the farm that they would pay better returns than any other investments we could make? While not neglecting our investments in the farm, equipment and stock, let us consider first of all living on the farm; consider the greater investments in comfort and happiness and the dividends that are sure.

One successful farmer, who has fertile acres, registered cattle and hundreds of rods of tile drains, said: "My children are the best investments I have. Robert, who is looking after the farm is a graduate of Cornell. At an early age he began to show an interest in planting things in the garden and caring for the poultry and calves. As much as we could, we let him have his own way, only giving him kindly direction and encouragement to have his work come into a harmonious plan, as much as could be. As he became older we counselled together. In was "our farm," and "our business," not "mine." He grew up strong; he had learned to think, to plan, to do things. From the beginning he had an interest in the farm and business, and I made plans for him to take a course in dairying at Cornell. My wife followed the same course with Marian. We have done everything we could to encourage them to have their own thoughts, hopes, ideals and plans in life and to make our home life so attractive that they would think of good things, have hopes for better living, develop higher ideals and a capacity to plan intelligently. We have endeavored to put hopes, ideals and unity of family interests above financial gains. They have married well and settled down where they can be a source of real joy and comfort to us in our declining years on the farm. Robert and Marian are the best investments I have ever made." This successful farmer undoubtedly told the truth about his investment. We doubt if he would change investments with Rockefeller or Morgan.

The investments in children depend largely on how the investments are made. Perhaps if they are kept out of bad company and given an opportunity to study and observe the greater and better things of life and country living you may increase the investment until they become your main support and source of satisfaction in old age —in that often lonely time when affection and companionship mean more than anything else to you. "My children are the best investment I ever made," says this good farmer. His children are. Yours may be if you bring them up to honor their father and mother, to be loyal, true and honest.

Your children may be the best investment ever made by any farmer, if they grow up to believe that right is stronger than might, and that the old farm home is the best place and brightest spot on this green earth. Investments in children may pay a high rate of interest, may bring in splendid returns, if your sons become square and upright men, capable of going on with your business when you are ready to give up active management, and your daughters become sweet, modest, womanly women, in love with their surroundings and kindly towards all of God's creatures. If you have not made a good investment in your children, whose fault is it, and is there time to correct your mistake?

HARRISBURG LETTER

Rural Schools to Front.—Prominent among the subjects to be discussed at the State Educational Congress, which is to be held in the State Capitol in the week of November 17 and be participated in by some of the most prominent of Pennsylvania's business and professional men, manufacturers, farmers, workmen and others, will be a discussion of the country school. For the last six or eight years the bulk of the serious consideration given to educational affairs about the Capitol has been in connection with the establishments in the cities and towns, due in part to the increase in urban population, the demands of industry for juvenile bands and the movements for supervision of child labor. Both Governor William C. Sproul and Dr. Thomas E. Finegan have expressed themselves as desirous of hearing what people think is wrong with the State School system and in what way it can be helped and also have called for a full exposition of affairs about the rural school from which have come many of the men of affairs in Pennsylvania. The belief is that the findings in the congress will be the basis of some remedial legislation next legislative session and that a plan of better distribution of the state school funds will be suggested. While the expert and the professional uplifter will be at the congress it is not probable that they will dominate it, as they have some state gatherings of recent years, and that the view of the man who pays the bills and does not get in the limelight will be listened to This conference will be more or less experimental, but if the business men talk education in a business way it will have possibilities.

Governor Wants Action.—Governor William C. Sproul has let it be known that he wants action and more prompt disposal of matters before state boards and it is likely that the Public Service Commission, most of whose members are away from Harrisburg the greater part of the week, will soon be announcing decisions at a rapid rate. The governor is also said to wish that the Industrial and other boards speed up their work. Care and expedition in handling of business matters at the Capitol is being urged by the governor upon department heads and his habit of sending for department chiefs and quizzing them about their work and the work of their folks is said to have been a bit disconcerting to some. The governor has the advantage of a quarter of a century of legislative experience and has one of the few men in the state who have thoroly studied the state government at his elbow, two facts which some of the folks at the Capitol do not seem to have realized as yet.

Business in Trees.—As a result of the meetings of the State Forest Commission scheduled for this week it is likely that the business of handling a state investment of some six or seven million dollars with over 1,150,000 acres of woodland will be placed upon a modern basis and new methods, including a budget system, be devised. The state will also put inspectors in charge of timber operations and all wood sold will be "scaled" and paid for accordingly. The forests are intended to be the foundation of the state's permanent school fund and the state administration wishes them to be more productive.

Build Schools Now.—Dr. Thomas E. Finegan, the State superintendent of public instruction, has called upon members of schools boards thruout the state to stop waiting for prices to decline. The state school head says that the trade conditions do not indicate that the cost of materials will drop to any extent and that it is the part of wisdom to go ahead and provide facilities rather than allow children to miss education. This advice has been given following a study of the situation by the architectual expert of the State Board of Education.

Grade Grossings Again. — The grade crossings has again cropped up to disturb the Public Service Commission and the announcement that some of its members have reached an agreement with the railroads for uniform sign boards giving warning has been met with a blast from the newspapers that what is wanted is a state policy in regard to abolition of grade crossings not means that will allow them to be continued indefinitely. The grade crossing situation has been referred to in this letter for the last five years and the commission since its creation has not abolished one percent of the crossings. In fact, the greatest abolition has taken place in the cities, Philadelphia, for instance, and the percentage of dangerous crossings abolished in the country has been small considering all the fuss made about them. The war furnished a very convenient excuse for not doing much and the announcement of a uniform sign board to be erected instead of a policy of getting rid of so many crossings a year does not appear to be popular.

Automobile Records Made.—The State of Pennsylvania is making a record both for number and license receipts of automobiles and it is believed that by November 1 there will have been received from licenses at least $5,000,000 all of which goes back to the maintenance of highways and that the number of vehicles of all kinds licensed will run around 450,000. While the rapid increase in cars bought makes accurate figures impossible it is believed that the number of cars owned on the farm and the number of motor trucks in farm use will be a surprise. Special efforts to get figures on the use of such vehicles on the farm will be made this year.

$30,000,000 in Road Contracts.—It is probable that before very long the aggregate value of the state road contracts let will be $30,000,000. Probably half that much is represented in county road contracts under way. The state is in the midst of one of the most stupendous road construction programs known in the country and the next year will see voting in a dozen counties on bond issues for roads.

Rural School Day.—The suggestion that rural school day be observed in some of the counties is being discussed. What is needed is a suggestion whereby it can be coupled up with some agricultural advancement idea. Days like Arbor Day are proclaimed and not followed up except in isolated instances. In fact, the observance of many "days" in the schools may be said to be sporadic.

Diptheria Again. — State health authorities are urging better attention to health precautions in the schools and the establishment of health courses. Diphtheria is prevalent more than ever this year and there are warnings to avoid influenza.

Dog Law Attacked.—Attacks made by people at the state convention of county commissioners on the dog law and other state affairs have not disturbed the serenity of some people here. The dog law is a matter more or less of local control and what seems to be needed is cooperation. State officials say that county commissioners do not act vigorously and county commissioners say that there are cases lying on desks at the Department of Agriculture which are not put into the hands of justices or pushed.—Hamilton, Harrisburg, Oct. 13.

NEW YORK LETTER

Automobilists Meet.—In Albany this week a great meeting of automobilists from this and other states, also Canada, will consider an important legislative program to better motoring conditions and to stop the epidemic of automobile thefts. The prominence of the speakers among whom are the Governor and leading state officials and the importance of the topics will make this a record meeting.

Cheese Men Reject Price.—For the fifth week the leading dairy boards of this state have rejected the prices offered for cheese by buyers. Salesmen refused to accept the 27½c offered on all but the Watertown board, where 4,200 boxes were sold on the Pymouth, Wisconsin quotations. This standstill in the cheese market with decreased butter prices is responsible for the drop in October milk prices to farmers. For the first time farmers are getting less for October milk than for September, when it costs more to produce the former. As milk prices are based on the butter and cheese market farmers are forced to see how they are hurting their own industry by buying oleomargarine and lessening the demand for butter and cheese. One Pomona Grange of the state has protested against the advertising of oleo at the fairs and others may well take up the subject and shut these demonstrations out of all our leading fairs. with leading scientists urging the absolute need of milk butter and cheese for the growing young and saying that oleo absolutely does not provide proper growth elements, this seems only logical.

Apple Buyer Dies—J. H. Killough formerly buyer of most of the apples grown in northern New York and president of the Champlain Valley Apple Company, is dead at his home in Brooklyn. For forty years he was in personal touch with growers and thru his encouragement many now valuable orchards in Clinton and other counties had their inception. The firm kept a buyer in Plattsburg representing the interests of this largest purely apple marketing concern in the east.

Interesting Silo Experiment.—Two of Cortland county's leading dairymen are carrying on an interesting experiment, under supervision of the State College, in an effort to prevent alcoholic fermentation and the after formation of acetic acid in ensilage. M. J. Peck a well known Holstein man has so much faith in the work that he has had the college distribute thru all his silage as the silo was filled, pure cultures of lactic acid bacteria in diluted form. Such large numbers of the bacteria are expected to arrest harmful fermentation as it usually occurs and to add 50 percent to the nutritive value of the corn in so doing. Another owner of a big dairy herd has filled two silos, one in the usual manner, the other using the lactic acid bacteria. Dairymen are watching the outcome of the experiment with much interest.

Home Bureau Agents Tour.—Miss Edith Rulifson, home bureau agent for Steuben County with her assistant Helen Bool, recently made a week's tour thru the more remote parts of that county "boarding round" with much profit to the residents. The trip was made in a Ford car, which was loaded with a fireless cooker, a pressure canner a dress form, numerous bulletins, a camera and other paraphernalia to be used in the daily demonstrations given during the week. Appointments were made in advance by mail and the meetings, the hospitality and the personal friends made during the week will be a big help in organizing the work there. During the week twenty home calls were made, six demonstrations before audiences were given, and six press notices of home bureau work were placed in local papers. Other agents might well spend similar weeks of travel.

Milk Notes.—In a report to the Fair Price Milk Commission made by Dr. Copeland, health commissioner for New York City, he says that a recent health survey by the department shows that in 11,007 families visited 5,775 mothers reported no milk used for children, due to its high retail price. The survey showed 1294 children suffering from malnutrition, 3,648 undernourished, 993 have aenemia, and 608 are suffering from miscellaneous disorders. The farmers are getting a lower price for October milk, and tho it costs more to produce than in September an attempt has been made to fix the blame on the Dairymen's League for the predicted raise of two to three cents a quart. The League is issuing a statement disclaiming responsibility for the raise. The farmer and the dealer have had their fight and are now doing business amicably. It remains for the consumer to fight the dealer for fairer retail prices. It is of interest to note that twenty years ago Cortland dairymen received but 99 cents per cwt. for milk at a leading butter and cheese factory—while milk retailed at 5 cents a quart. Apparently the idea of high profits on the part of the distributors prevailed as long ago as that.

Seed and Fertilizer Outlook.—It is not believed that the price of most seeds will be much higher the coming Spring, excepting grass seed and one or two oter exceptions. Grass seed has been coming up constantly in price. There will be little or no reduction in the price of acid phosphate. The price in 1919 in 30 ton lots was $24 a ton and the fall trade is asking $22.50 a ton.

Cabbage Blighted.—Cabbage is now bringing $35 a ton in Syracuse. Late cabbage may reach $50 as many fields in this section are blighted, showing no salable heads. The direct cause of much of the trouble is aphis. One farmer of Clay drew a load to the station which returned him $109 for the load.

Good Returns From Apples.—Grant Hitchings of South Onondaga, a pioneer in the mulching system of growing apples from 100 acres now in apples will sell 10,000 bushels or about $30,000 worth this year. He has the biggest orchards in Central New York and neither cultivates nor cuts a hay crop in his orchard, mowing them a couple of times a year and spreading the hay under the trees. This reduces labor and the trees respond well.

Small Notes of Interest.—The Home Bureau of Otsego County bought cooperatively 1,752 dozen can rubbers, at a saving of $87.50 and 208 packages of dyes and a saving of $6.24. The Home Bureau of Rensselaer County is helping its farm women to sell their surplus canned stuff to city customers. A shop was opened in Troy and the response from both city and farm women indicated a real need of the service. The shop charges 20 percent commission on sales or a dollar fee for one year and a 10 percent fee on sales. Great benefit is being derived from bee schools held in the state. At the one held at Farmers' week last February the beekeepers promised an attendance this year of 600 and they are planning to make good on this promise.

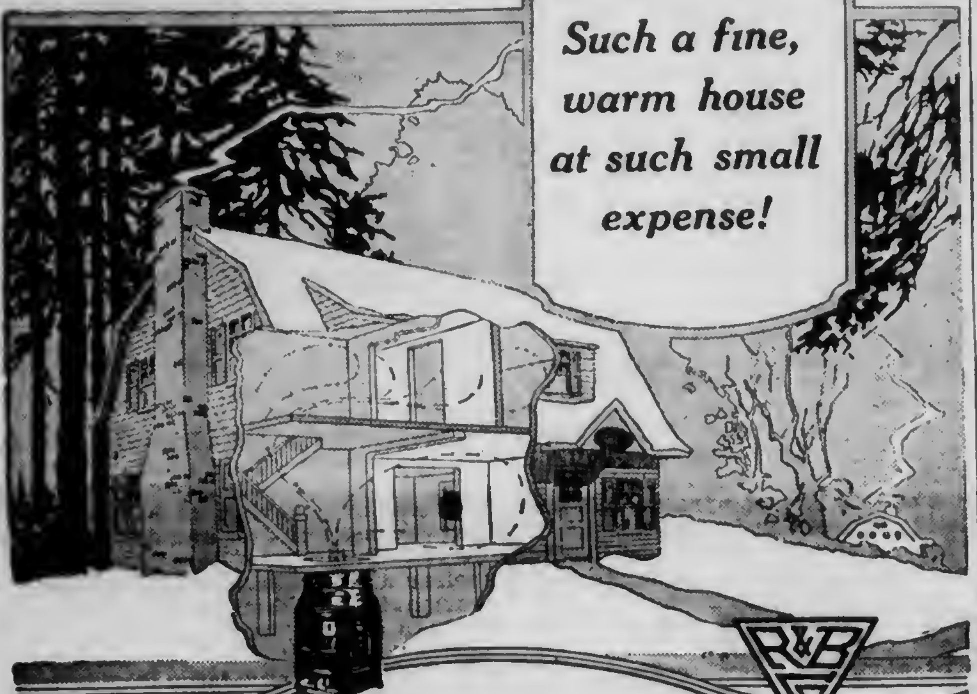
NEW JERSEY NEWS

Poultry Fanciers' Association.—New Jersey poultry fanciers gathered in Newark during the week in a business session in which a state association was formed. The organizing of these fanciers was based upon the belief that an organization of this kind would be of benefit to every person in New Jersey engaged in chicken raising, especially on a large scale. It was claimed that legislation frequently needed proper handling; encouragement should be given to chicken and pigeon exhibitions in counties and thruout the state; the poultry fancier industry should be placed on a high plane of sportsmanship and business ethics, and a close relationship should be built up and maintained among those interested in such work. The committee in charge of the dinner and meeting was composed of poultry fanciers from various parts of New Jersey.

Reformatory Farm Shown in Movies.—The activities of women inmates of the State Reformatory for Women at Clinton or any similar institution were shown on the screen in various parts of New Jersey during the week and created great interest. The exhibitions were given under the direction of the State Department of Institutions and Agencies of which Burdette G. Lewis, formerly engaged in charitable and correctional work in New York state and New York City, is the commissioner. The reformatory movie is a twelve-minute reel and the pictures pay particular attention to the women clad in khaki bloomers cutting, loading and hauling corn and placing the harvests into machines that reduces it to fodder. A number of other farm scenes were also taken. Pictures of inmates in the fields doing Autumn work will soon be taken at several other correctional institutions in the state. The general title of all of the films is "How New Jersey Cares For Her Wards." The pictures will be shown in their entirety on a circuit made up of State institutions.

Advance Interests of Poultrymen. —A dinner was given in this city during the week to a number of Mercer County Poultrymen by Harvey Rogers, prominently identified with chicken raising at his home near the Inter-State Fair grounds in Mercer County. The object of the function was to advance the interests of the poultrymen and the Mercer County Poultry Association. It was decided that a campaign should be opened for the purpose of increasing the membership of the county organization from 200 to 500 members.

At present and prospective prices for meat and wool there is every reason to prevent sickness in the farm flock and to raise each lamb that is born.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ONE-PIPE HEATER

Solves Many Problems

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Just think of what this means in economy!—Installation costs cut to a minimum. No lengthy pipes to buy or run to various positions. No cooling of the heat before it can reach your rooms. Less dust—less dirt—less labor. *Direct heat* rises and spreads instantly to the upper floors. None is wasted. Warm house, cool cellar. And you can burn *any kind of fuel*—LESS OF IT than is demanded by other types of heaters.

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Extra strong and light draft. Simply made—easily repaired. Will not break on first stump or rock. Good suction, sticks to the ground; suitable for rough work and in any soil.

You can trust Hamburg Plows to turn the furrows all the way—no jumping or running out, but easy, steady operation. Every plow absolutely guaranteed—defective parts replaced or money back.

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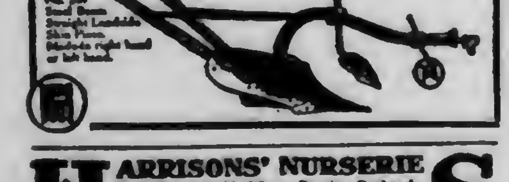

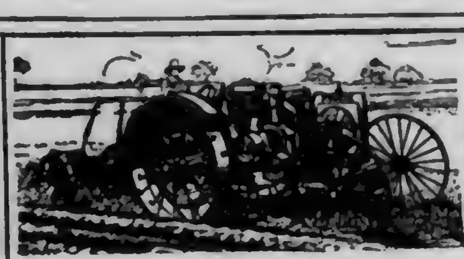

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WITH THE
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A light, easy running Kerosene Tractor for general farm work. Is small, sturdy and has plenty of power. Made and sold by Frick Company, manufacturers of substantial Farm Power Machinery since 1853. Write for price and further information. Dealers wanted. Immediate deliveries.

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HARRISONS' NURSERIES Fruit Trees Budded from Bearing Orchards. Peach, apple, pear, plum, cherry, quince, grape-vines, strawberry plants, raspberries, blackberries, evergreens and shade trees. Catalog free. Box 63 Berlin, Md.

SEED RYE for sale. $2.00 bushel.
S. W. BUSH, Croton, N. J.

HORTICULTURE

FARMERS ENJOY BOAT PICNIC

Eight hundred Gloucester farmers, their wives and children went to Augustine Beach, Delaware, September 20 on the first boat trip ever held by the Board of Agriculture. It was a surprising response to an appeal for a good crowd and indications point to its being an annual affair.

The farmers had a good meeting. They listened better and thought more about their business than in all their other meetings so far this year. They had good speakers too and the audience was told to organize, deal with the middle men and manufacturers as an organization and not as individuals; cut acreage to secure better financial returns in the case of tomatoes and to put the business as far as possible on the cost plus basis.

N. J. Farmers' Boat Picnic—The Landing of the Picnicers at Augustine Beach, Del.

Mr. A. L. Clark of the New Jersey Bureau of Markets plead for better rural life. He urged community organization in order to secure better schools, churches and more advanages. "We do not want to eke out an existence," he said. "We want education refinements and advantages that other people have and we want our boys and girls to see that the best opportunities in the United States are on the farms.

Several men representing local farm rganizations gave short talks on the work their associations are doing and what they expected to do this winter and next season. Mr. I. O. Taylor of the Penninsular Tomato Association was the next speaker. He spoke for a smaller acreage and better grading in an effort to secure a price high enough to cover cost and a fair profit. He said that the 2800 members of the Maryland and Delaware Associations are stronger than the National Canners Association and extended an invitation for New Jersey to join with them into a Tri-State Association.—L. A. Cooley, New Jersey.

TIMELY GARDEN TALK

By R. W. DeBAUN

Potatoes For Seed Free

Many growers of early Irish Cobbler potatoes, who read the Pennsylvania Farmer can obtain several bushels of most excellent seed potatoes free of charges. All they have to do is to go out in the fields where their early potatoes grew and dig up the seed. Many early potato fields were planted to alfalfa, clover, spinach, rye, turnips, etc. Many of the stray pieces of potatoes have started to grow. At present the vigorous little green plants do not look like much, but if the ground in which they stand is loosened up, several little bright potatoes will be found clinging to the vine when it is pulled up. Strange as it may seem, the little green potatoes will be the most productive seed obtainable for planting the following spring. One bushel of the little potatoes will go nearly twice as far as a bushel of ordinary cut seed.

Sweet Potatoes a Heavy Crop

Indications are that there is an unusually heavy crop of sweet potatoes this fall. At the present time prices are low and the markets are jammed full of sweet potatoes, especially from the eastern shore of Maryland and Virginia. An unusual situation exists this season; the seconds are selling to the canhouses for extra high prices when compared with the price of the table stock. The canners, of course, are anxious to get anything because the pack of tomatoes, pumpkins, fruit, etc., is very light.

The official crop reports showed that there was also a very heavy crop last year and yet the market prices were high all winter. This indicates that at the present time a heavy crop of sweet potatoes does not mean low prices. Therefore, the man who stores his crop properly may get good prices when his product comes out of storage. This is what we might call a double guess because no one knows what the price will be nor do we know how the product will keep for winter use. Storage facilities especially in the South are miserable. Dr. Cooke of the University of New Jersey claims that two-thirds of the sweet potatoes grown rot before they are eaten. Therefore, it is a big gamble when sweet potaoes are stored for winter and spring use.

It is generally admitted that the sweet potato growers of New Jersey have developed very successful methods for the storing of their crop. In fact I have seen 10,000 bushels of sweet potatoes in storage at Swedesboro, New Jersey, on July 1st. They were in splendid condition because they had been properly stored all winter and spring.

Digging is done on sunny days and the "sweets" are allowed to sun out for a few hours before they are laid, not thrown, into baskets. Care should be taken at all times to avoid breaking the tender skin of the sweet potatoes. Rotting usualy starts wherever the skin is bruised or punctured. For years it has been the practice to roll the potatoes out of the baskets into slatted bins but the use of hampers instead of bins in storage is rapidly increasing. New hampers are packed full and the lids are nailed on in the field. Then the hampers are carefully stowed away in storage, at once standing them alternately (i. e. head to head and bottom to bottom) about five hampers high.

It is natural for the "sweets" to give off moisture during the first two weeks they are in storage. Unless this excess moisture is carried out of the storage, the potatoes can not keep well. Heat helps to drive the excess moisture or sweat and the heated air quickly takes up the moisture. By means of ventilation the warmed, moisture laden air is allowed to go out of the storage. It is replaced by fresh air which takes up moisture as it warms up. The most desirable temperature to maintain during the sweating period is 85 "Fahr." How ventilation should not be checked in order to maintain the desired amount of heat.

A point usually neglected by the grower is to allow the fire to go out occasionally during the sweating period. Nothing could be worse. Warm air, filled with moisture gives off the moisture as it cools. Therefore, when the fire in the sweet potato house is allowed to go out it makes the storage more moist besides checking the curing process. After the digging and curing season, the temperature is reduced to about 50 to 55 degrees. At all times the sweet potatoes must be kept perfectly dry and they must not be moved nor disturbed until they are to be resorted and packed for immediate shipment.

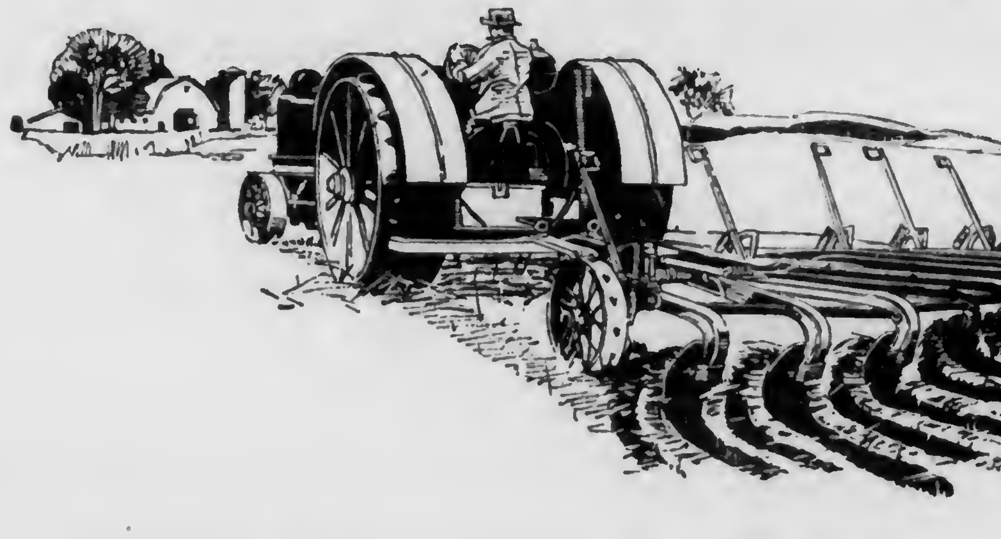
As a general thing, sweet potatoes are more profitable than white potatoes. The sweet potatoes do well on ground so sandy and poor that white potatoes would starve. Sweet potatoes require a moderate amount of fertilizer and three bushels of "seconds" will produce enough plants for an acre. They do not require spraying and the yield and selling price is usually higher than white potatoes.

Cleaning the Strawberry Field

The air was filled with a heavy mist this morning (October 3rd) and everything was dripping wet. Naturally, we didn't care about harvesting corn or picking peppers. To save ourselves from getting wet we made ourselves believe that the strawberry patch needed hoeing. It was lucky we did, for when we got at it we found a great number of little weeds getting started for next year. They were such as daisies, plantain, chickweed, sorrel, nut grass, dock, etc. We used short hoes (handle a foot long and the hoe 2½ inches wide) and as the weeds were loosened, the unoccupied hand gathered them up and placed them on small piles. After the weeds wilt down it will be a small task to carry them out.

CHAMPION TRADE MARK Champion

Dependable Spark Plugs



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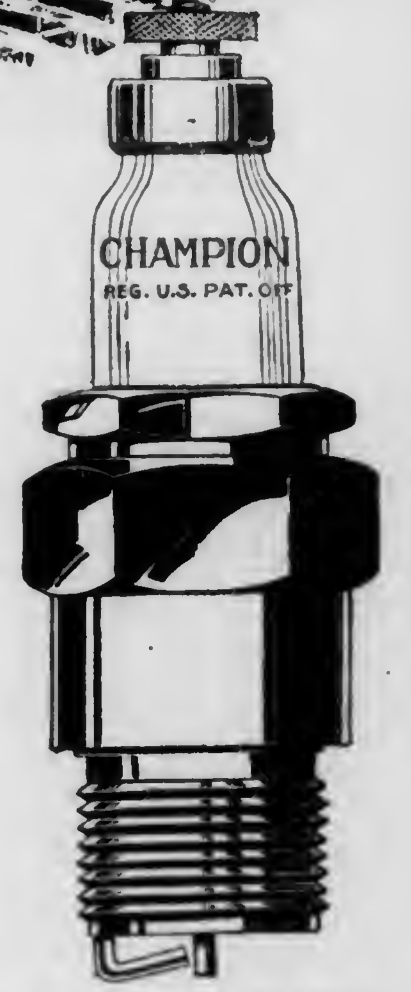
FOR hours and hours at a stretch, the tractor engine is taxed to its utmost, imposing a sustained, maximum demand upon the spark plugs.

To withstand such brutal punishment and not "miss" even temporarily, spark plugs must be of more than common hardiness and efficiency.

Our famous No. 3450 Insulator, with its greater resistance to shocks and temperature changes, together with our patented gasket construction, fortify Champion Spark Plugs for the terrific battle they must constantly wage in tractor engines.

Because Champion Spark Plugs dependably perform this strenuous service a large number of tractor manufacturers use them as **factory equipment.**

There is a Champion Spark Plug for *every* type of motor car, motor truck, tractor, motorcycle and stationary engine.



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For Tractors, Trucks and High-Powered Cars
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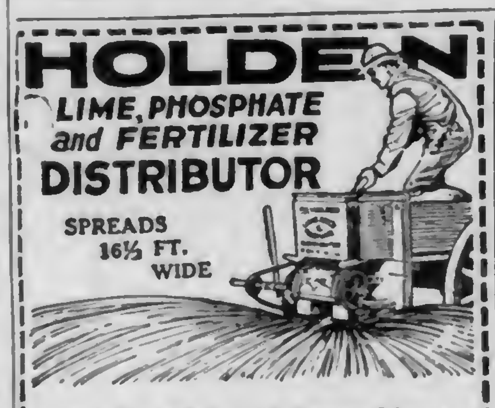

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Use the Holden Lime, Phosphate and Fertilizer Distributor 30 days—put it to every test. If it does not do all we claim send it back and your money will be refunded promptly. Write today for full particulars and special trial order.

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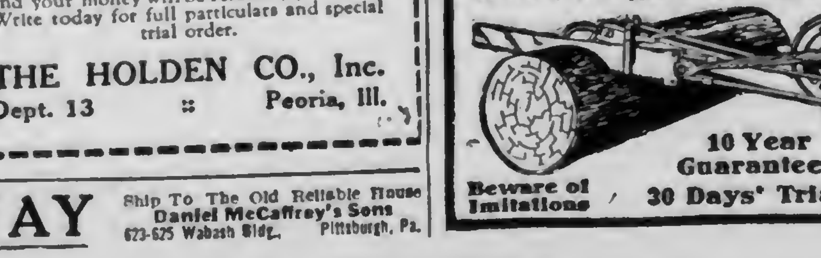
"I Cut 27 Cords of Wood a Day"
—says Noah Digge, of Jacksonville, North Carolina, "with my Ottawa Log Saw under unfavorable conditions, and in 52 hours I sold and delivered $75 worth."

You, too can make big profits with the Ottawa Engine Log Saw. It is always on the job, and saws from 25 to 40 cords a day. Provides cheaper and more plentiful local fuel. Pays for itself in short time. Takes the backache and worry out of wood cutting. One man does the work of ten.

OTTAWA LOG SAW Saws Down Trees —Cuts Up Logs By Power

Has two sets of spindles on combination axle—side spindles for straight ahead moving on the road; and end spindles for moving sidewise along the log from cut to cut. No stopping the engine and no lifting, prying, backing or twisting to set from cut to cut. Direct gear to drive saw—no chains to tighten; no keys and no set screws. Automatic friction clutch protects saw, allowing slippage under any pinch. 4-Cycle Frost Proof engine, Oscillator Magneto Ignition. When not sawing, demount saw equipment, by pulling one pin, and use engine for all kinds of other work.



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Write us, now, for full information on this log saw, and on our fast cutting equipment for sawing down trees. Low prices, now, on both outfits.

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WALTHAM THE SCIENTIFICALLY BUILT WATCH & AND THE FOREIGN BUILT WATCH

Know Something About the "Works" in the Watch You Buy

If you open your watch and examine its mechanism, you will find it consists substantially of two supporting plates, between which is mounted a gearing of meshed wheels to take care of the movement, recording time. This is called the train, which we will speak of in our next advertisement.

The lower supporting plate in a Waltham watch is the foundation upon which every unit revolves and is fixed. It is bored with minute holes to take the pivots, screws, pinions, etc.

This lower plate is drilled and threaded by one of the most exclusive and wonderful machines ever designed by the genius of man — an exclusive Waltham invention from the master-mind of Duane H. Church.

Many operations are accomplished with such methodical, automatic regularity that one instinctively imagines that a marvelous human brain guides the extraordinary operations of this machine.

It makes every operation (and there are 141) with infinitesimal exactness to the ten thousandth part of an inch — flawless, beautiful in its complex simplicity — every plate a replica of every other plate, proving Waltham standardization to be one of the miracles of American mechanical genius.

The plate of the foreign-built watch is subject to the variations of hand process. Made to variant sizes and models without precise relation to the parts which they are to contain, which parts are made elsewhere in many homes and small shops, by hand.

No hand work could ever approximate the beautiful and flawless exactitude of this Waltham drilling and threading.

So when you buy a Waltham watch you are assured of a standardization of quality and leadership which has placed the Waltham watch on the pedestal of world dominion.

This story is continued in a beautiful booklet in which you will find a liberal watch education. Sent free upon request. Waltham Watch Company, Waltham, Mass.

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Extremely thin at no sacrifice of accuracy

Maximus movement, 21 jewels

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$150 to $275 or more depending upon the case

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WHITE LIGHT FROM KEROSENE Beats Gas or Electric

BURNS 94% AIR
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TWICE THE LIGHT ON HALF THE OIL

Make your home bright and cheerful, **saving one-half on oil.** Government and leading University tests prove this wonderful new Aladdin nearly five times as efficient as best round wick open-flame lamps. **Burns 50 hours on one gallon** common kerosene (coal-oil). No odor, smoke or noise, no pumping up, easy to operate, won't explode. WON GOLD MEDAL. GUARANTEED. Prove for yourself, without risk, by

TEN NIGHTS FREE TRIAL

that Aladdin has no equal as a white light. If not satisfied, return at our expense. $1000 given anyone showing us an oil lamp equal in every way to this NEW MODEL 8 ALADDIN.

GET YOURS FREE! We want one user in each locality to whom customers can be referred. In that way you may get your own without cost. Be the first and write us quick for **10 DAY FREE TRIAL OFFER** and learn how to get one FREE.

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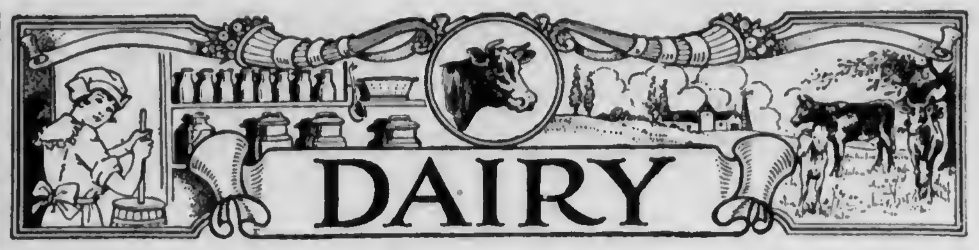
Make big money spare or full time. Our easy selling plan makes experience unnecessary. We start you without money. Sample sent for 10 days trial and **GIVEN FREE** when you become a distributor.

Agents Wanted



DAIRY

PASTEURIZATION OF DAIRY PRODUCTS

In the early days of pasteurization of milk or cream for butter it was done to further its keeping qualities, and those who practiced it did not advertise the fact that they were doing so. The public was not in sympathy with the idea, thinking that it made the milk and butter less digestible. Nowadays the position is reversed and the public is demanding that milk be pasteurized as a safe-guard to health. With the recent agitation the consumer has swung over in sentiment where he believes that pasteurization means "Safety First." The great, daily papers are devoting columns of news space and editorials to the crusade. These things show that pasteurization is a very live topic and one which all producers of milk and butter must give attention to.

A Permanent and Sanitary Milk House

Professor Fred Rasmussen, of the Dairy Husbandry Department of the Pennsylvania State College, gives as his opinion that as far as milk production is concerned it will soon not be a question whether pasteurization may be done or not, but that it will have to be done if the producer wants to stay in the business.

It is only in the last six or eight years that the sentiment in favor of pasteurization has developed, but it has grown so rapidly that more than half of the butter in this country is now manufactured from pasteurized cream, and practically all the large manufacturers pasteurize. They are not slow to advertise this fact to the public and thus the sentiment grows.

There are two approved methods of pasteurization, known as the continuous and the intermittent. Both are effectual if properly done. However, it has been proved that in using the continuous system a higher temperature than was formerly thought necessary is required. 180 or 185 degrees being none too high. In the intermittent system the milk is held at a definite temperature for a definite length of time. A heat of 145 degrees for twenty or thirty minutes has been found to be satisfactory.

In pasteurization, tubercle bacilli, being most resistant, any heat that is sufficient to destroy them will destroy other germs as well. In order for the process to be successful it is necessary to have a heat sufficient to kill the germs without affecting the physical qualities of the milk. It must not be heated so as to change the taste or to cause the cream to rise to the surface. In short, there must be no change that could be discerned by the eye, taste or smell. In regard to the cost, it will of course be smaller for the large manufacturer than for the small one. In the pasteurization of cream for butter it can be done in large plants as low as one-tenth of a cent per pound, while in smaller concerns the cost may run one-fourth of a cent per pound.—J.

DELAWARE COW-TESTING ASSOCIATIONS

The Diamond State Cow Testing Association has completed the first month of its new year. Due to the excessive rains and the fact that the majority of the cows on test have been in milk for several months, no high records are in evidence, however, several cows are making splendid showings. Mr. J. T. Edmundson of Newark owns both cows heading the honor list this month. Mr. Edmundson is to be commended on making a record of 1581 pounds of milk and 53.8 pounds of fat on a cow under the adverse conditions.

In the Middletown Association it is a signal fact that those farmers who give most attention to the rotation of crops and soil fertility have better pastures and the highes average producing herds. It is also evident that those herds which have received some grain during the summer have demonstrated above all peradventure that it is highly practical to supplement grass with a small amount of grain; that the cows will not only do better during the summer, but that they will go into the winter season in a much better condition for making a creditable record.

FAKE ADVICE FOR THE FARMER

Calf Feeding

This is the season of the year when agents for a certain class of Agricultural (?) Journals find it easiest to obtain subscriptions. The alluring offer of farm magazines at 10 cents per year—six years for fifty cents is tempting. In a sample copy of one of these is this advice to farmers:—"Don't let young calves get fat, especially those calves which are intended for future cows in the dairy. If they get fat when young they will form the habit of putting on flesh instead of becoming good milkers."

I have seen quite a number of calves lately whose owners seem to have been reading this item repeatedly, and intend to follow instructions to the letter. Poor calves! Standing around with prominent ribs, staring eyes and hair on end. They testify to the theory that their keeper does not intend to let them form the fat-forming habit and thereby lessen their chances of becoming good cows.

Years ago I had a heifer calf several months old which I fattened for the butcher. On the way to the slaughter house with the youngster I began to ask myself "Why not raise it." I did raise it and it became an excellent cow. The theory that baby flesh on any animal will remain with it thruout life does not hold true. Why do calves become fat, when well fed? Because it is natural for them to do so. Poor calves show either an insufficient amount of nourishment or poor digestion. If poor digestion is the cause of their leanness then they should never be allowed to grow into cowhood and assume the function of producing milk.

I have never known a poor sickly calf to develop into a good healthy cow. If calves are not well fed when young they are inclined to become sickly and they can never fully develop. There is a certain class of stockmen who really believe that it is detrimental to a heifer to become fat in that their tendency will be toward flesh instead of milk. But facts do not bear out this theory. What would these stockmen do if perchance they would turn the young things on good pasture and they would "besh up?" Would the youngsters be ruined? Would their prospects for good milk producers become weakened?

It is time for Uncle Sam to call a halt on the cheap trashy papers with which our country is becoming flooded. Such publications are a menace to the good people of our land. Many young people have been brought to ruin by reading advertisements in trashy publications which are printed merely to gain advertisements. — Ellsworth Brown, Mercer Co., Pa.

FEEDS FOR DAIRY BULLS

A satisfactory feed for a mature bull is alfalfa or clover hay and a grain mixture of corn, with oats or bran. A bull must have plenty of exercise. He does not need to be housed in a warm barn but is kept in the best condition when given a dry but open shed with a paddock attached so that he can go in or out at will. Every mature bull should have a ring in his nose. There is some difference in opinion in regard to dehorning but it is always safer to handle a bull without horns.

There are at least 150,000 dairy cows in New Jersey.

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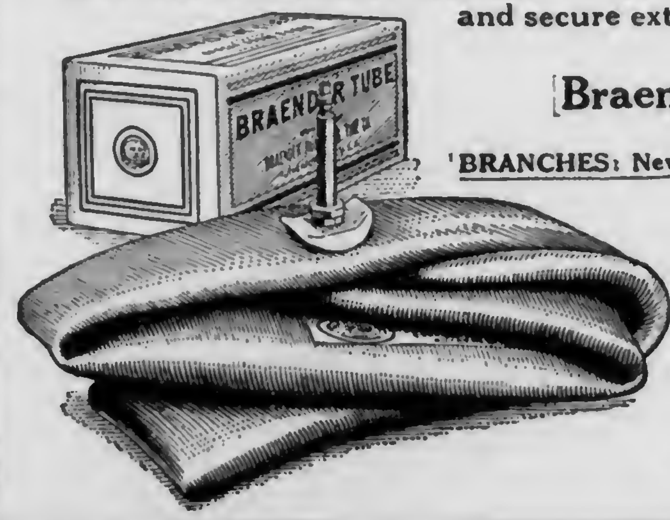

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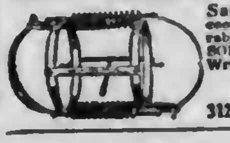

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This great ration is in big demand by dairymen everywhere because it stimulates cows to top-notch milk production *and keeps it there.*

Years of careful tests by practical dairymen have made International Ready Ration superior in every way to any other dairy feed on the market. Guaranteed 20% protein. Every ingredient the best that money can buy.

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Don't take the word of thousands of dairymen. Don't take our word. Try it yourself! Place a trial ton order with your dealer. If he cannot supply you, 'ware of "something just as good." Write to us and we will see that you surely get the genuine International Ready Ration.

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MINNEAPOLIS *Live Salesmen Wanted* MINNESOTA

The Cost of a Quart of Milk

In recent years, there has been a great deal of talk about the price of milk and the cost of producing it, but very seldom are any definite concrete figures given showing the actual cost of a quart of milk. Along this line, it might be interesting to give some figures taken from a small dairy in central Pennsylvania, the Beaufort Farms, located near Harrisburg.

A ledger is kept at the farm office, in which the cow account represents the receipts and expenses in connection with the Dairy. All feed is charged to the cow account at the price paid for it, and in the case of home grown feed, the price at which such feed could be sold is used. Depreciation on the cows is charged and the use of equipment, milk wagon, etc., as well as the time of the horse which did the hauling of the milk to the town.

During the year of 1918, the average herd was 8½ cows and had there been more in the herd, the overhead charges might have been proportionately less, as well as the labor charge. Still it is a typical herd and the figures are presented below.

Instead of making a pasture charge, the actual expense of keeping up the pasture was charged to the cows, which included about 7½ bags of fertilizer in 1918. Miscellaneous included, among other things, filter cloth and the expense of harvesting ice.

The average cow in Dauphin County produces 4,000 pounds of milk a year. With a cost of $236.30 for keeping the cow, 100 lbs. of milk would cost $5.90 and one quart, 13 cents. Now, the average wholesale price in Harrisburg for 1918 was $3.56 per 100 lbs., which by the way, was only 7.7 cents per quart, or a loss for the average cow of $2.34 a hundred and for the year $93.60. Of course, this might be higher than actually would be the case because the chances are that the 4,000 lb. cow would not be fed quite as much as the 7000 lb. cow. But, the latter cow will more than make up for the extra feed.

The cows in the Beaufort Farms' Dairy produced an average of 7150 lbs. of milk during the year 1918. Dividing this into the cost of maintenance $236.30 gives $3.30 per cwt., or a profit of 26 cents per hundred and$ 18.59 for the year. As a matter of fact, the Beaufort Farms received a bonus of 25 cents a hundred for producing an extra grade of milk which helped along the profit in addition to good luck with calves.

It can easily be seen from these figures that the scrub cow does not pay and the only way to make money on cows is to have good producers, and at that, the profit is not anything startling or profiteering. Every penny earned by the dairy man is well earned.—E. B. Mitchell, Dauphin Co., Pa.

Cost of Maintaining a Cow on the Beaufort Farms' Dairy, 1918.

Average Herd—8½ cows	Total for Herd	Per Cow
Feed	$1219.23	$143.43
Labor	527.19	62.02
Horse Labor (Hauling milk to town, etc.)	111.64	13.13
Use of Equipment (Wagon, etc.)	24.43	2.87
Tractor (Grinding Feed)	8.04	.94
Keeping Up Pasture	65.40	7.70
Veterinary	25.00	3.00
Miscellaneous	27.35	3.21
Total Cost	$2,008.28	$236.30

LEGUMES A SUBSTITUTE FOR GRAIN

That profits may sometimes be increased by the substitution of legumes for a large part of the concentrates in the dairy ration, is brought out by cow testing association records obtained by the Dairy Division of the United States Department of Agriculture. The records from six associations where alfalfa formed a large part of the dairy ration were compared with the records from eight associations where legumes were fed sparingly, with the following results:

In the alfalfa district the cost of grain was 16 percent of the total feed cost, and in the other district the cost of grain was 41 percent of the total feed cost. The average milk yield of the alfalfa-fed cows was 6,805 pounds and the average yield of butterfat was 281 pounds. In the other district the average milk yield was 5,234 pounds and the average yield of butterfat was 238 pounds. For the alfalfa-few cows the average income over cost of feed was $75 and for the grain-fed cows the average income over cost of feed was $37.

The alfalfa-feed cows may have been better cows, and the climate may have been better adapted to dairying, but as both districts are favorably known for their dairy products it may be assumed that the cows were of good quality and well cared for in both districts. It seems fair, therefore, to conclude that the higher production and greater income above feed cost of the alfalfa-fed cows were due largely to the feeding of home-grown legumes. In any case it is well worth while for the farmers of one district to study the feeding practices of other districts. If legumes add to net profits why not grow and feed more legumes? If the soil is not adapted to legumes it may pay to add lime or manure or whatever else it lacks in order that the dairy herd may be supplied with an abundance of home-grown legumes.

AYRSHIRE ADVANCED REGISTRY RECORDS

Forty-four cows and heifers completed Advanced Registry Records during the past quarter, the total entries averaging 9997 lbs. milk, 401.54 lbs. fat, 4.02 percent, twenty-seven of the entries being three-year olds or under.

Our world record was made when Bloomer's Queen owned by Penhurst Farm, Montgomery Co., Pa., produced 21,820 lbs. milk, 856.41 lbs. fat in the senior four-year-old class, displacing the former champion August Lassie whose record was 17,784 lbs. milk, 720.03 lbs. fat 4.05 percent. Since January, 1918, 558 cows and heifers have qualified for Advanced Registry.

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PASSING EVENTS IN PICTURES

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1.—Red Cross Feeds Firemen at $1,000,000 Fire on Long Isand.

2.—Director and Boys of the Vatican Choir, Visiting This Country.

3.—President Elliott, one of the Public's Representatives at the Labor Conference.

4.—Capt. Hayes of the "Olympic" who has Carried Millions of Soldiers Across.

5.—Judge E. H. Gary, President of the U. S. Steel Corporation.

6.—Members of Penna. State Constabulary Guarding the Strike Situation.

7.—"Pop" Geers, Premier Jockey of the Country.

8.—Miss Fannie Harley, Dr. Mary Walker's Successor in Dress Reform.

9.—Inspecting Washington's Methods of Handling the Markets.

10.—Two of the White Sox Pitchers—James and Wilkinson.

A HORSE CAN TRAVEL WHERE AN AUTOMOBILE CANNOT GO

Often in the deep snows of winter an automobile cannot get through the drifts, but the horse can travel anywhere if he can secure footing.
There is just one thing will insure safe footing on any road anywhere any time, no matter how icy or slippery, and that is the

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POULTRY

COAXING HENS TO EAT

First Prize Regal W. Wyandotte at N. Y. Fair, 1919.

The question is repeatedly asked, "Can we produce eggs at a profit with the present high-priced grains?" While the price of grains has increased so much during the past year, we also find an increased price in poultry products. In arriving at a comparative profit, the relative cost of feed and price of poultry products must be considered in relation to the actual total increase rather than the percentage increase. For example, Leghorn pullets averaging to produce one hundred and forty-four eggs in one year which sold at thirty cents a dozen, gave a value of eggs over feed cost of $2.70 when the feed cost was ninety cents per bird. Now if the feed cost has increased seventy-five percent, making a total of $1.57, while the value of the eggs has increased fifty percent, making a total of $5.40, the value of eggs over feed cost, would be $3.83, or $1.13 greater than it was before the price of grain began to go up so rapidly. The price of eggs should only have had to increase twenty percent while the feed cost increased seventy-five percent to show the same original profit over feed cost.

The average farm flock carefully handled should give an average egg production of one hundred and forty eggs per year where scientific culling and feeding is applied. Higher averages than this can be secured by paying a little attention to selection of the breeding stock. The 1910 census report states that the average American hen produced only seventy eggs per year, which is doing little better than breaking even on the feed bill. The reason for such low production is not altogether a question of breeding, but also a question of feeding. It is not a very difficult matter to bring a flock production from seventy to one hundred and forty egg average by scientific feeding, but to increase the average egg production above this point, it is necessary to use pedigreed stock. A flock that can average one hundred and forty eggs per year are paying big dividends on the investment. All that "Biddy" requires is a chance to make good. Why not give her a chance and compare the profit with other branches of live stock kept on the farm?

Poultry raising is essentially a farm proposition. Ninety percent of all the eggs produced in this country come from the farm. The farmer has every advantage over the commercial man in that he can produce eggs cheaper by utilizing waste grain and allowing the hens free range, but, until the present time most farmers consider the hen a necessary evil and that their care comes under the specific realm of the already overtaxed farmer's wife. This system, or lack of system, of neglectfulness results in feast and famine methods of feeding and unsanitary conditions in the poultry house. As a rule the hen's ration is limited to a dish of oats, morning and night, and if there is a surplus of skim-milk beyond that which the pigs require, this is also given them and constitutes the ration that "Biddy" is to lay profitably upon. We could not expect the greatest milk production from cows fed solely on hay, neither can we expect the greatest egg producion from fowls fed on whole oats. By this we are not condemning oats as a feed, but they do not contain sufficient nutrients for the hen to manufacture eggs rapidly. If we would stop for a moment and consider the contents or nutrients in an egg, we would see the futility in the individual method of grain feeding.

Production Depends Upon Heredity and Environment

Heredity includes that which is transmitted from the parent to the off-spring, whereas environment takes into consideration conditions favorable to, or against, the comfort and happiness of the hen and includes feeding, watering, housing, weather care and so forth. Under environment, we may rightly classify feeding as a most important factor. The machinery of a hen is analogous to that of a gas engine, while some may have more efficiency than others to begin with, it requires the proper mixture or fuel or food and in sufficient quantities for amounts of the mash mixture.

In determining the character of a ration, we must take into consideration the following points: First, the price of feed; second, palatability; third, nutritive ratio; fourth, digestibility; fifth, season of the year. In compounding the following rations for laying hens, the above points were followed.

Scratch Feed.—Cracked corn, 200 pounds; feed wheat, 20 pounds.

Dry Mash.—Bran, 20 pounds; middlings, 20 pounds; cornmeal, 20 pounds; ground oats, 20 pounds; meat scrap, 20 pounds.

Skim-milk, buttermilk or plenty of fresh water to drink. Sprouted oats or mangels, sugar beets, grit and oyster shell.

The dry mash is the barometer of egg production. If the birds are consuming large quantities of mash, it means palatability. If they show a tendency to leave it, the mash then contains some ingredients that are obnoxious to the hen's sense of taste.

To a large extent, it is thru and by means of the dry mash that the whole feeding system is properly balanced for egg production. This dry mash should be fed in hoppers. The hopper should be open at all times, thus allowing the hens free access to it. The scratch feed should be fed in a litter of straw and should be so regulated that the hens must eat define amounts of the mash mixture. If over-feeding grain happens, the hen is liable to gorge herself and not have the appetite or capacity for the mash mixture. A laying hen eats approximately four ounces a day, two-thirds of which should be grain and one-third mash.

Hens Must Have Lime

Hens cannot make eggs unless they have the lime with which to manufacture the shells. Feed and water usually contain only enough lime to shell one egg for each ten eggs the feed would produce. The number of eggs produced from high-priced feeds should not be limited because of lack of lime. Keep oyster shell before the hens at all times. Supply plenty of hard, sharp grit. We must not confuse grit and oyster shell because they each have separate and distinct work to porform.

The value of skim-milk as a feed for poultry cannot well be over-estimated. It not only has a high nutritive value but keeps the digestive tract in sharp, clean condition.

Skim-milk contains nearly all the nutritive elements in whole milk. The skim-milk retains all the protein and ash of the whole milk. In a recent test a pen of hens which had been given all the water or milk they could drink, had their supply limited to only one dishful a day. The egg yield was reduced exactly one-half. This shows the value of water or milk to egg production. While they are both cheaper than feed, they are worth just as much to the hen in manufacturing eggs. Provide large water vessels and keep them well-filled.

Some form of green foods or succulents should be given in some form or other. When possible, we would advocate the growing of sprouted oats. This is a highly nutritious feed and has both a tonic effect on the hen and a stimulating value in consumption of feed which results in higher egg yield. Mangels, sugar beets, or ensilage may take the place of sprouted oats and are a good supplement to the above laying ration.

SOME FACTS ABOUT FEEDING

In its natural state the fowl, in hunting for her food, is compelled to eat slowly, one grain at a time. Usually, after each mouthful the hen is obliged to scratch for more. So ingrained is this instinct that a hen with her chickens will scratch and cluck when she comes to a pile of grain that could be pecked up without any further effort. One of the difficulties in feeding fowls is that, as usually given by keepers, the food is in a mass and can be gobbled up too quickly.

The hen may well be compared to a piece of machinery. Take an engine, for instance. It is a useless article until supplied with fuel, or energy. The hen is very much on the same order. She must receive sufficient food to maintain the body heat and repair waste tissue, and then she must have a surplus to utilize in the manufacture of the egg. The hen that roosts out in the cold must eat more food to keep up the heat of the body than the one that is properly housed. One purpose of food is to furnish fuel to keep up the heat of the body. Heavy hens require more grain than light ones, and in severely cold weather all need more to sustain their body heat.—Michael K. Boyer, N. J.

Handling And Treating Sick Animals

Restraining Devices, Equipment and Supplies That Farmers Should Have---W. C. Fair, V. S.

How helpless is the veterinarian when called to render first aid to livestock, unless he has with him a few useful tools or instruments, also some of the common drugs used in every day practice. If this be true, then the farmers and livestock owners must be at a far greater loss to render first aid to sick and injured animals, unless they are equipped with some tools to work with, and have a few useful stable remedies to give or apply.

Restraining Devices

First, every farmer should know something about the restraint of domestic animals, in order to protest himself against injury when doing minor surgical operations and giving or applying medicine. Every farmer should own a well-made and ordinary rope and stick twitch. It is made by simply boring a hole one inch from the end of a piece of hard wood, 20 inches or more in length, another smaller hole near the other end for a string. Tie a small rope loop in one end, slip the loop over the upper lip, tighten fairly snug to attract the animals attention while you work on him. If you have no assistant, tie the end of twitch stick to the throat latch and leave it tied until you are thru with the operation. You can make a dozen different kinds of twitches, all of which act on the same principle and may be applied to lower lip or ear, but preferably to upper lip. I frequently find it convenient to use a bridle bit, a large iron ring, a clevis, a horse shoe, a short piece of wood to twist and shorten the loop; but, with this kind you need a helper.

Another simple means of restraint is a "War Bridle" which is conveniently made by using a piece of small rope, making a loop that will not slip on neck, passing one end thru the mouth, the other thru the loop; or, use an ordinary neck strap with D. ring, attaching a piece of rope to ring, passing it thru mouth and back thru ring, then have the assistant tighten rope. This will attract the attention of the animal while you are working on him. There are many different kinds of war bridles used by horse-breakers, but, I have mentioned the most simple one.

Another very useful means of restraint of the horse is a loop and rope gag which is applied by making a small loop on end of rope, pass rope thru mouth, over poll, then end of rope thru loop, tighten and tie with one-half hitch; or, you may use a rounded piece of leather for mouth with billet on one end and buckle on the other which can be tightened and locked without the aid of an assistant.

Another excellent means of restraint is a piece of strong strap, 1½ inches wide and eight inches long with a ring on each end and straps attached to each end with buckle and billet. These straps should be long enough to buckle around the hind leg of a horse or cow above the hock joint, or above the knees of a horse. This simple appliance will often prevent the horse from striking you while working on head or fore part of body; also, prevent either horse or cow from kicking you with sufficient force to do any harm. It is often very convenient to make a loop with a name strap, slipping it over hoof, then hold up foot and buckle strap to surcingle or snugly around fore arm. This holds the foot up and very often prevents horse from striking or kicking. When fore foot is held up by hand, be sure and compel the horse to rest his full weight on the three legs. Don't hold up or support the weight of body, or the horse will then be able to kick you with either hind foot.

It is also wise to keep on hand a set of breeding hopples, which can be made at small cost. Have your harness maker make two straps, 1½ inches wide with D ring fastened three inches from bucke. The billet should be long enough to go around the pastern, shin or above hock of horse's leg. Two pieces of rope, five feet long, can then be spliced to each ring, one into rings of strap, the other a ring with rope fastened to it. Then, pass the rope around neck and fasten it to ring which is four or five feet from the hopple, and tie it so that it can be quickly released. This simple appliance can be quickly adjusted and will often prevent a person from being kicked while stitching wounds or applying medicine to the hind quarters of a horse, or cleaning the sheath of a gelding.

Throwing a Horse

Every farmer should know of a simple and safe method of throwing a horse down. Gleason's Method is very simple and all that is required is a halter and rein; also, a knee trap to tie up one fore foot and a piece of rope 12 or 15 feet long. The left fore foot is strapped up, the rope is attached to right fore pastern, passed up over right shoulder and back. Then you stand at left side, push horse from you, then he drops on both knees. Let him remain in this position a few moments—gently pull head to right side towards shoulder, then after a little time horse will lie down on his left side, then keep head suspended, both knees folded.

Rarey's one-man method of casting a horse is similar to that of Gleason's, but the knee strap is applied to the right fore leg, and the foot raised against the elbow. A rope is then placed around near left fore pastern and another around near left hind pastern. The leg ropes are then passed thru a ring attached to a surcingle and carried over back. The operator of course stands on the off (right) side against the horse. The head is drawn around to the opposite side by means of a halter rein, then the operator pulls the ropes and the horse goes down quickly, and can be tied. Wounds on hind quarters of a horse can frequently be safely stitched by backing the animal against a stall partition.

Cattle Restraints

Cattle are extremely susceptible to pain, hence the necessity of efficient restraint in order to protect the operator against injuries as a result of kicking or goring. A very useful cattle tool is the nose clamp with rope, or if an assistant will place one hand on horn and thumb and finger in nostrils, an ox can usually be controlled. The restraint of one hind leg can sometimes be accomplished by passing tail between hind legs and held by the assistant around the leg you aim to control. A surcingle buckled tightly around the flank of cow will very often cause her to stand quietly and allow you to handle her. A hock twitch is also a very useful tool as is the knee strap. The breeding hopples can very often be used to good advantage in restraining a bull or cow. In order to cast an animal, secure a piece of rope 35 or 40 feet long to the horns, pass it along upper part of neck, and half hitch around base of neck; also, around chest and flank. Place a nose clamp on nose, then the assistant pulls on rope, and the animal will soon lie down.

Hog Restraints

In order to work on the hog with safety, especially if the animal is aged or large, some means of restraint is necessary. A novel method is to lay a barrel on its side, place some feed in bottom, the hog walks in after the feed, then the barrel can be set on end and hog caught in this way. Or, a loop can be placed on hind leg conveniently. The so-called champion hog holder is a mechanical device by which one man can hold a very large hog. A young pig can be suspended in the air either wholly or partially by hand, and an older hog is easily cast and readily tied. A very convenient method is to pass a rope with loop on it, around body back of fore legs, then suspend fore quarters in the air. Another method is to pass a loop around upper jaw, back of tusks and tie hog to post. A shy hog can be snared by baiting one part of slip loop. When he bites the bait, pull the rope and the loop tightens around upper jaw back of tusks, then tie him to post or tree.

Handy Tools

It always pays a farmer to keep on hand useful veterinary instruments and a few stable remedies, in order that he may intelligently render first aid to injured and sick livestock. A suitable place should be made to keep these supplies in. Then when needed they can easily be found. In many localities there are no veterinarians available; hence, the necessity of being equipped to do emergency work yourself. In the kit of supplies, you should have needles of different sizes for stitching wounds, also silk or linen or other sewing material of different weight. You should also have a syringe that holds not less than one ounce that can be operated with one hand. This instrument is suitable for giving medicine and injecting wounds. You should also own a fountain syringe which you will find to be extremely useful in washing out vagina or rectum, or irrigating wounds. Every dairyman should keep on hand a few milking tubes, teat plugs and a teat expander. The farmer should also own a male and female catheter for horses and also an ecraseur or an emascnlator for castrating animals. Keep on hand a clinch cutter and pinchers for removing horseshoes; also, a knife for cutting hoofs, and a float for filing teeth. Every dairyman should own a milk fever outfit, in order to be ready to promptly apply the air treatment, if necessary. He should also own a cattle trocar and cannla for puncturing cattle for bad cases of bloat. Remember a much smaller trocar and canula should be used when puncturing horses or sheep for bloat. A probang is another instrument that cattle men should own, handy to use in case of choke.

Treating Wounds

Farm animals are continually being wounded. The first step to take in the care of a wound is to explore the parts to ascertain if there is a foreign body present. Then arrest the hemorrhage to prevent waste of blood. This can often be done by twisting the blood vessel or tying it, or by compression.

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LIVE STOCK

NATIONAL SWINE SHOW

More than 1500 head of hogs from 33 States and Canada were on exhibit at the National Swine Show which was held in Des Moines, Iowa, from September 29th to October 4th. They were estimated to be worth more than a million and one-half of dollars. No doubt more high class hogs were gathered together here than have been gathered together for some time, many of them winners at previous shows and state fairs. As a special feature of the show, a series of lectures was given by authorities from all parts of the United States on swine breeding and raising. In the students' judging contest held on the first day of the show, students from Kansas, Nebraska, Missouri and Iowa took part. The contest was won by Missouri. P. M. Vandiver of the Missouri team won the individual prize of $50.

An Aberdeen-Augus Junior Yearling Heifer

The Poland China breed was most in evidence at the show, followed very closely by the Duroc Jersey, the Chester Whites ranking a good third and the Berkshires fourth. Iowa exhibitors easily lead the show in number of animals on exhibition. A feature of the show was an exhibit of hams and bacon by the Department of Agriculture, showing the preparations and the proper methods of the home curing of meats.

Prof. J. I. Thompson of the University of California judged the Berkshire class. The awards were as follows: Senior Champion and Grand Champion Berkshire boar went to Fairview Ruler owned by Piping Brook Farm of Connecticut; the senior and grand champion Berkshire sow went to Lady Pfemier 209th, owned by Piping Brook Farm. Junior champion boar and junior champion sow were both won by Rogers Bros., of Kentucky, on Matchless Lee's Double and Royal Matchless Lady. They also won the Chamber of Commerce and the Cane Mola special prizes.

In the Duroc Jersey classes, Great Orion Sensation owned by Ed. M. Kern, of Nebraska, won both senior and grand champion boar. Queen of Pathfinders owned by W. N. Putman & Sons, of Nebraska, won both senior and grand champion Duroc Jersey sow. The junior champion boar Duroc Jersey was Major Sensation, owned by Clyde Lorentz of Missouri. The junior champion sow went to Walts Orion Lady XIV, owned by Ira Jackson, of Ohio.

In the Chester White classes, B. M. Boyer & Sons of Iowa, won senior and grand champion boar on Prince Big Bone. Junior champion Chester White boar went to, King Anak, owned by C. F. Brown, of Iowa. Senior and grand champion sow was won by Big Nellie 2nd, owned by Raymond Brown of Pennsylvania; Junior champion sow was won by the same exhibitor on, Perfection 2nd.

In the Yorkshire classes B. F. Davidson of Iowa, won senior and grand champion, and also junior champion boars on, Oak Lodge Sardis 31st, and Deer Creek Sardis 2nd, respectively. He also won senior and grand champion sow and Junior champion sow on Deer Creek Elena 7th and Deer Creek Elena 18th, respectively.

In the Hampshire classes senior and grand champion boar went to Messenger All Over, owned by Keystone Farms of Ohio. Junior and champion boar went to Essig's Midel, owned by, Willie Essig, of Iowa. The same exhibitor also won senior and grand champion sow, with Lady Big Bone. Junior champion sow went to Miss Liberator owned by Wickfield Farms of Iowa.

In the Poland China classes, senior and grand champion boar went to, The Pilot, owned by Blomendal Brothers of Iowa. Junior champion boar was won by Nobility owned by E. C. Caverly & Sons, of Illinois. Senior and grand champion sow went to Miss Bob Wonder, owned by Meyer Brothers & Parker of Nebraska. Junior champion sow went to Big Model 2nd, owned by Winn & Moore of Missouri.

In the spotted Poland China classes senior and grand champion boar went to Gerstdale owned by Bock & Shirk of Indiana. They also won junior champion boar. Senior and grand champion sow went to Dolly Z owned by Shaver & Fry of Iowa. They also won Junior champion sow.

A special feature of the show was a debate on the advisability of the U. S. Government's control of the packing industry. W. B. Culver of the Federal Trades Commission talked for the government while L. D. H. Weld of Swift & Company plead the cause of the packers. An intensely interesting discussion but not much new information was brought to light. Sales made by the exhibitors amounted to about $250,000.00 during the sale.—Dr. G. H. Conn.

BREEDING GOOD DRAFT HORSES

When we consider the type of mare required to produce our ideal draft horse, weight, sound feet and legs are the chief points. To produce the best colts the mare should have one or more crosses of draft blood in her composition. Percheron, Belgian, Shire or Clyde does not matter so long as she is large enough and has the desirable conformation. She should possess a good, clean-cut head and neck; lean, sloping shoulders, not straight and fleshy ones as is often the case in the Percheron breed; short, stout back; strong loin; a roomy barrel; well-sprung ribs; and a good, level croup. She should have plenty of bone and muscle and good, deep, open feet, tough and horny. Mares of this types can usually be found in every community where the horses have been upgraded with high-class stallions.

It stands to reason that every farmer who has a few mares to breed should patornize the best stallion within driving distance from his farm. Eastern farmers as a body, but with some exceptions, look upon the raising of a colt as too speculative a proposition to warrant the contraction of a debt amounting to $20 or $25. The best proof of this is the fact that a high-class pure bred stallion that stands at a fee of $20 or $25 has difficulty competing with the grade stallion that stands at a fee of $10 or $15. There is no effort among farmers to get the best. Here as a rule the farmer makes his choice largely on account of price or color or weight; sometimes because the owner of the stallion is a friend or a relative. Few seem to care to give the mating of their mares the consideration which it merits. In every community the farmers who have used good stallions have prospered far beyond those who have followed the "penny wise, pound foolish" policy.

The choice of the breed is, perhaps, of less importance than the choice of the individual stallion. All breeds possess different points of merit and may be used to advantage in improving the progeny of our grade mares. The only way to approach perfection in improving our stock of draft horses is to mate good mares with good stallions of one breed and stick close to the one line of breeding until we can note the desired improvement in our stock of colts. Any other method mixes the lines of inheritance and so establishes variations in types among the colts. The second generation presents a more varied array of shapes and mis-shapes than resulted from the first cross with the grade mares. Each of the breeds has within its ranks horses which closely approach the size, bone, quality or shape for which one of the other breeds may be especially noted. It is by the selection of the best stallions for breeding purposes that improvement toward the desired characteristics may be most surely and profitably conducted. Each of the draft breeds is gradually approaching the best features of the others.

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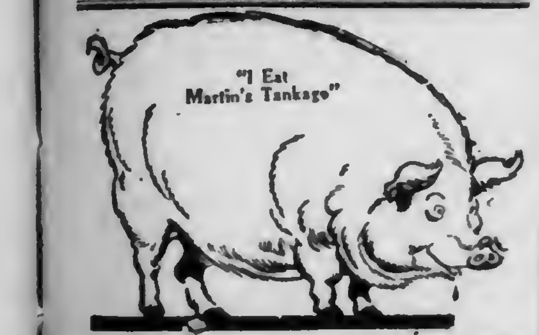

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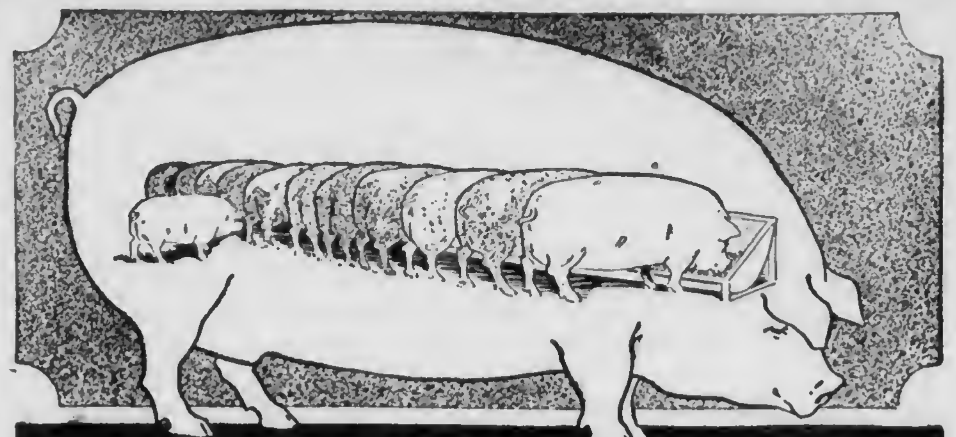

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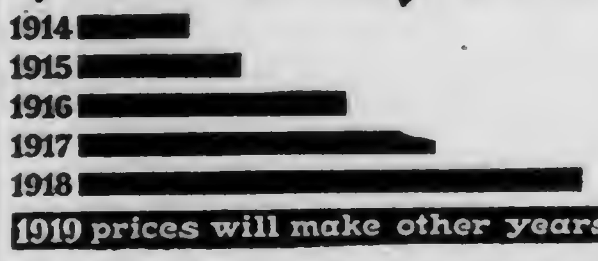

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Training Little Citizens

Courtesy and Consideration

BY BERTHA JOHNSTON

"The greater man, the greater courtesy."

In every home opportunities should be made for the little children to practice consideration and care for something weaker than themselves. The cherishing instinct, both in the individual and the family, needs cultivation and direction. It is manifested in the love of little girls for their dolls and in the devotion of boys to their pets. If this quality of nurture, is not exercised or properly directed, it withers; for affections must be exercised if they are to develop. We often see spoiled children in American families, where all their desires are gratified without effort on their own part and they are given no opportunity to serve. Many a mother virtually makes a slave of herself for her children, humoring every whim, and relieving them of all care, trobule and responsibility, only to find when they are grown that they are utterly selfish and inconsiderate.

Unfortunate, too, is the only child or the youngest member of the family, who is overindulged, with no more dependent member of the household to call forth his tender feelings. Herein lies one great value of the kindergarten, where children are given opportunities to help those younger than themselves.

For the child without companions in the home, the parent should provide occasions that require service or sacrifice for others. Arrange to have his friends come frequently to play with your little one, and share his toys, suggesting that the little guests must have the best.

Adaptability is gained thru companionship with one's equals. From association with boys, little girls learn something of fair play, and become acquainted with the sturdier virtues; while, from girls, the boys learn to have a chivalrous attitude toward womankind.

The instinct of nurture is developed thru the care of a garden or pets, for a child must exercise thought and put it into practice, in order to obtain results. Then, too, generosity and respect are stimulated by sharing the fruits of his care, a little bouquet for mother, a head of lettuce for a neighbor, an extra kitten for a playmate.

If pets have young, the child's mother should call attention to the care of the mother for her little ones, and her courage and self-sacrifice whenever the young are endangered. A child should be taught to take entire charge of his pets, to weed and care for his garden, if he is to receive the full benefit in character-development and achieve the self-respect which comes from responsibilities accepted.

Then, too, good manners which spring from consideration are as essential to the happiness of the world as are good morals, and parents should be examples of both to their children. How often virtuous people make us unhappy by their lack of tact! Courtesy and graciousness smooth out the rough places of life. A tiny boy of 3 can raise his hat and one of 5 can rise at table and push mother's chair into place. When older people enter a room, children should rise; in fact, they should be taught to practice all the little daily civilities. But courteous manners are taught slowly, "for precept must be upon precept, precept upon precept; line upon line, line upon line; here a little and there a little." Many a man of good character has greatly limited his usefulness by his lack of "polish," because his mother, either from stupidity or over-indulgence, neglected his social training!

At this momentous time, it is especially important that all means possible be employed to foster the instinct of caring for the weak and dependent.

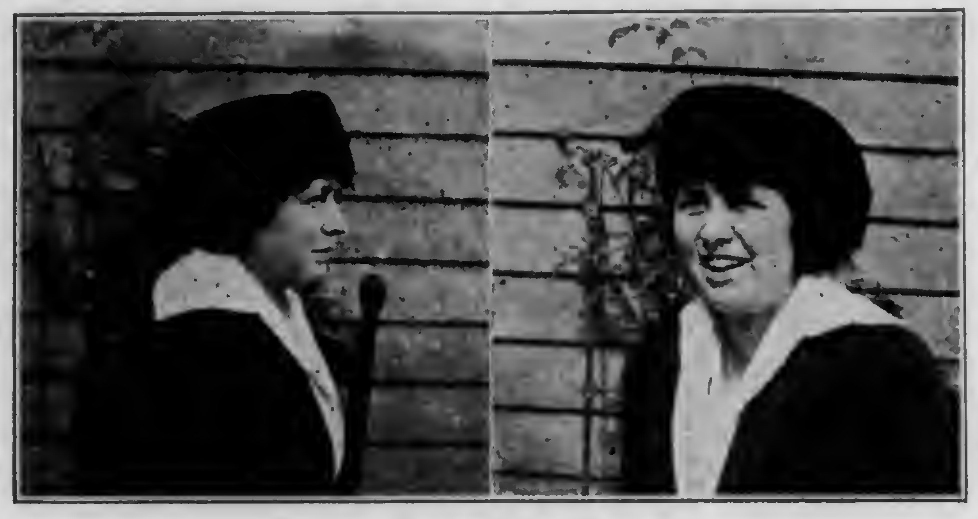
It would be well if more children were made to feel responsible for some child of less favored circumstances. Its astonishing how boys and girls will rise to the occasion when responsibility is placed upon them. In 1913 my 11-year-old niece who lived in London, had a "godchild" in another city, to whom she wrote a monthly letter, and sent little gifts at Christmas-time and other holidays.

At the present time the millions of little Allied orphans should make a strong appeal to the childhood of America. Correspondence between them would not only teach our children consideration for others and develop their familiarity with a foreign language, but it would also help cement the friendship of America with her Allies and greatly promote the cause of Internationalism.

SOME HOME-MADE HATS

That Girls Can Be Proud Of

Hat No. 1, of which two views are herewith shown, is made of bias strips of panne velvet. The crown frame is a 5-inch band of wired buckram, cut to fit the head comfortably. First, cover the top with crinoline, then with a smooth piece of velvet, pinning this in place neatly before sewing it to the frame with long stitches. The sides of the frame are covered with two folds of bias velvet. The top fold is put on first, thus giving a finished appearance that will be satisfying to the home milliner. Each fold covers half of the side, the lower half not being put on until the brim is in place.

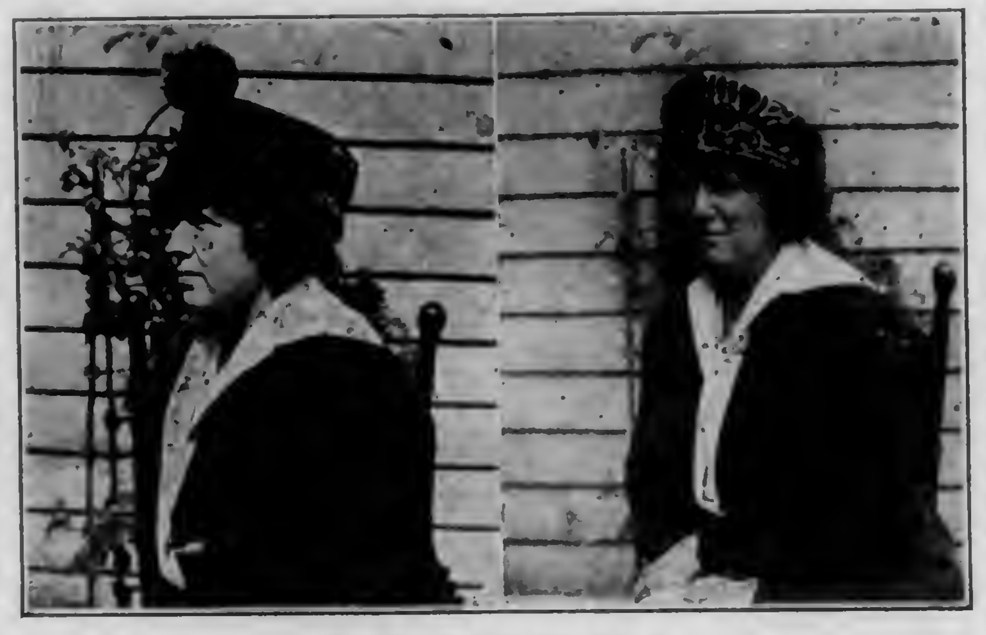


Two Views of Hat No. 1

The draped brim is a yard-long bias fold about 13 inches wide. This piece, as shown in the photograph, is tucked in a crosswise pattern, thus decorating the front of the hat. Make the tucks very narrow, and stitch them on the sewing machine. Or this tucking may be omitted and a pretty applique of braided or beaded design be applied instead.

Sew this soft brim loosely to the crown, gathering the material only at the back. The front and sides must be sewed on loose enough to turn up and back gracefully, as indicated in the photo. They may be pleated very slightly here and there, if necessary, to get this graceful looseness and the necessary shaping.

Sew the top edge of the brim to the base of the outside of the crown, then the lower edge to the under side. Put the lower fold of velvet on the crown so that it will cover the edge of the brim, and the lining will cover the other edge. Never leave raw edges to show, and always line your home-made hats, then they will have a better millinered appearance, and will look "smarter." An unlined hat is a dead give-away on the home milliner.



Hat No. 2 and Hat No. 3

Now turn back the front of the brim so that the tucking will show, stick a fancy long jet pin, as illustrated, into the side of each front near the top of the brim to hold the brim in place.

Next line the hat with a strip of thin black silk, shirr up the loose edge, or else make a narrow hem in it and run a tiny ribbon thru it and draw it up and tie the ribbon neatly.

A hat so made at home by the clever girl or woman will cost about half what a similar one purchased at the millner's would cost—yes, very often less than half. You would do well if you were to get one ready made for $8.50 this fall, and if it were made to order it would doubtless cost more, at any rate at the city stores.

Hat No. 2

Hat No. 2 has for its foundation a 10-cent frame of buckram. I changed the style of it somewhat after covering it, because the style was not so becoming as I wished. The narrow brim and the top of the hat were covered with what was left of a badly worn black fur-fabric hat of other days. The band is composed of bits of furniture plush, just samples, in dark shades of green, peacock-blue and old-gold. These samples were interspirsed with pieces of black plush. When the strip was neatly pieced together, I neatly machine-stitched it between each piece of plush and across the top and bottom after turning in the edges. Then I put around the base of the crown a cord of black plush, made by covering a piece of clothes line with the plush.

The pompon that adds height to the hat is a green feather left-over from some old millinery.

The hat was lined with some left-over thin black China silk, that was once part of the lining of a black lace waist. It is shirred up with a gathering string of soft black baby ribbon. The hat has a real tailored well-finished effect; and it had the honor of being exhibited at our county fair by request of our county home demonstration agent.

Hat No. 3

This is also a real clever thing. The frame was a midnight blue straw, very becoming to its owner. So she dyed a faded georgette waist midnight blue with navy blue soap dye and a little black dye added to attain the right shade. With three thicknesses of this georgette crepe she covered the straw frame. Then she sewed on an applique of blue and white beads, a decoration originally on the old waist, pinned the filmy black lace veil in place, and got a hat that is a real artistic "creation." The photograph does not do full justice to its beauty. We made her let us show it also in the clothing conservation booth at our fair.

Girls, why not make your own hats? It is lots of fun to contrive ways to use up old material so attractively. And besides it saves a lot of money, and gives one the chance to have more than one hat a season. Wonder how many of you are making your own hats as successfully as this girl is.—The Make-Over Lady, Broome County, N. Y.

SEVENTY-FIVE AND THE ATTIC

For several weeks every afternoon I had been noticing an old lady pass our house. She was a dainty little old lady, always dressed so neatly in black and carrying a little black hand basket. One afternoon when I saw the trim little figure coming along the road, I walked down to the gate.

"Good afternoon," I ventured smilingly; "isn't it rather warm for you to be out this afternoon?"

She smiled and said:

"Yes, it is warm, but my room is so hot that I come out and walk down the shady side of the road."

"Then you live on the other side of the road?"

"Yes, I live with my son in that big, white house up yonder."

"Won't you come up and sit on our porch? It is cool and shady up there."

"Thank you, I would be pleased to."

I made her comfortable in a low rocker. She looked so lovable that I should have liked to kiss that sweet old face.

"Surely there is some part of that big house where you can stay when your room is so hot?"

"Yes, but I am so afraid of being in the way. You see, I have not been living with my son and his wife long. I lived at Mayfield forty years, where I was housekeeper for the Rector. I was left a widow when my son was nine years old, and I put him in a boarding school and went to work for the Rector's family. When he finished school he got along nicely, and married when he was thirty. Only once have I been to visit him, and that was to see his first-born ten years ago. But the Rector was getting feeble, and had to leave the rectory, so I came to live with my son. He seemed very happy at the thought of having me live with him. And his wife greeted me kindly. I was given a room on the second floor, but a month later I was moved to the third floor, as they had to have the room. My son's wife is a very busy woman and keeps her house very nice, but she seldom has time to talk to me, so I keep out of the way."

"But does your son know that you have been moved to the third floor?"

"Oh, he is away all day. He goes to the city early, and comes home at night very tired, and I could not think of troubling him about it, for the weather will soon be cooler, and the room will be nice, sunny and warm in winter. Besides, if I mentioned it, it might cause trouble between him and his wife, and I wouldn't want to do that."

Presently my young daughter brought in a tray with tea and thin bread and butter sandwiches. The little old lady seemed to enjoy it all so much. Presently she arose to go.

"You will come again soon, won't you? Please do; it has given me so much pleasure," I urged.

"But I do not like to impose on your kindness."

"But you are doing me a kindness," I insisted.

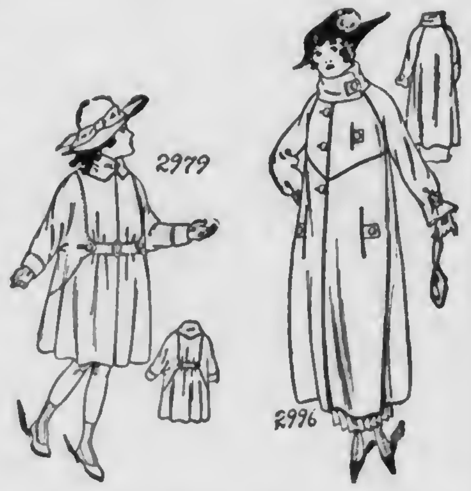
The sweet old face lighted up. That was the beginning of many a delightful visit paid me by the dear old lady. And she was never happier than when she was lending a hand with my sewing or any task to which her long experience as the Rector's housekeeper contributed frequent interesting suggestion.—Mrs. E. X., Marshall, Pa.

Making the kitchen attractive as well as convenient lightens the daily work.

PENNSYLVANIA FARMER PATTERNS

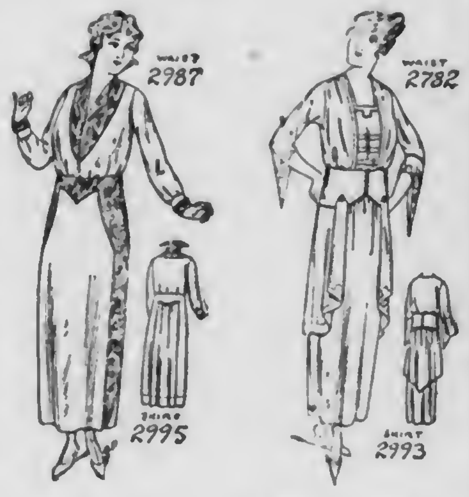
Give figures and letters of each pattern exactly as printed at beginning of each description or we will not be responsible for correct filling of orders. Give bust measure when ordering waist patterns, waist measure for skirt, and age for children's patterns. Address Pennsylvania Farmer, 261 S. Third Street, Philadelphia, Pa.

2979.—New Coat For Little Miss.—The sleeve portion forms part of the front and back. Cheviot, serge, velvet, velveteen, plush, corduroy, velour, tricolette and jersey cloth are good for this design. The coat fronts may be rolled high or low. The pattern is cut in 4 sizes: 6, 8, 10 and 12 years. Size 10 requires 3½ yards of 44-inch material. Pattern, 10 cents.

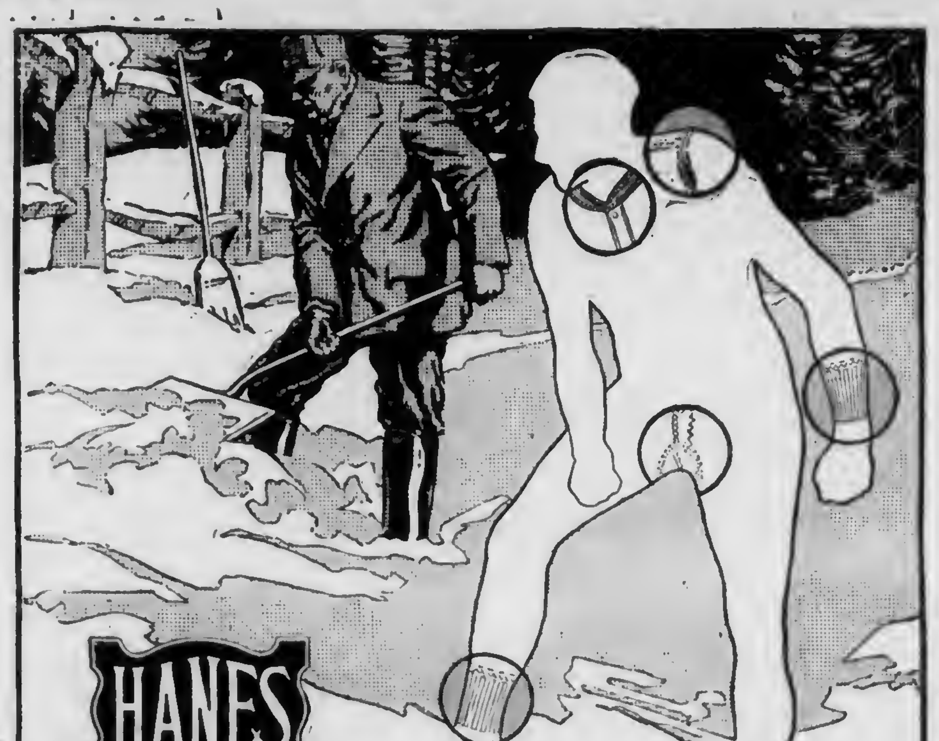


2996.—Ladies' Coat For General Wear.—This is a good model for velour, cheviot, double-faced cloakings, velvet, plush and other pile fabrics. The pattern is cut in 4 sizes: Small, 32-34; medium, 36-38; large, 40-42; extra large, 44-46 inches bust measure. Size medium requires 4⅝ yards of 54-inch material. Pattern, 10c.

Waist, 2987, and Skirt, 2995.—This graceful creation is of blue serge and black moire. Taffeta and serge or crepe de chine and satin, would also be effective. The waist pattern, 2987, is cut in 7 sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. The skirt, 2995, is also cut in 7 sizes: 22, 24, 26, 28, 30, 32 and 34 inches waist measure. A medium size will require 5⅞ yards of 44-inch material. Width of skirt at lower edge with plaits extended is about 2⅛ yards. This illustration calls for two separate patterns which cost 10 cents each.



Waist 2782, and Skirt 2993.—Satin charmeuse, in a pretty shade of brown was the material selected. Beaded embroidery forms the trimming. Brown velvet and beige georgette would also be effective. The skirt and waist may be finished separately, and for a separate skirt the tunic could be omitted. The waist pattern is cut in 6 sizes: 34, 36, 38, 40, 42, and 44 inches bust measure. The skirt is cut in 7 sizes: 22, 24, 26, 28, 30, 32 and 34 inches waist measure. A medium size will require 7 yards of 40-inch material. Width of skirt at lower edge, is about 1⅝ yard. This illustration calls for two separate patterns which cost 10 cents each.



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Hanes is made in winter weight Union Suits and Shirts and Drawers. Illustrated here is the staunchest, most comfortable, wear-resisting union suit ever sold at the price.

Hanes Union Suits have the most desirable and dependable features—unbreakable seams; reinforced, non-stretching buttonholes *that last the life of the garment;* tailored collarette that cannot gap; shape holding elastic shoulders; elastic knit wrists and ankles; pearl buttons sewed on to stay. And, a closed crotch *that stays closed!*

Hanes Shirts and Drawers have the same desirable quality; perfect workmanship and features. Drawers have the durable, snug-fitting 3-button sateen waistband.

Union Suits for Boys In quality, cozy warmth and workmanship are unsurpassed at the price! Reinforced at all buttonhole and strain points. In fact they duplicate Hanes Union Suits for men, with added fleeciness. Made in sizes from 2 to 16 years. Two to four year sizes have the drop seat.

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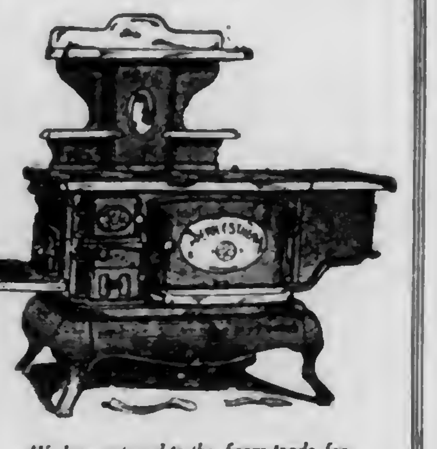
Range will meet all the requirements of the "Pennsylvania Farmer" satisfactorily.



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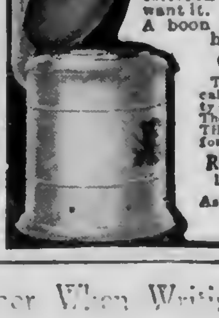

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The germs are killed by a chemical in water in the container. Empty once a month as easy as ashes. The original closet. Guaranteed. THIRTY DAYS' TRIAL. Ask for catalog and price.

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Ask about Ro-San Washstand and Rolling Bath Tub. No Plumbing Required.

THE FARMER MECHANIC

When Does It Pay a Farmer to Attempt Complicated Mechanical Work

With the usefulness of electricity on the farm rapidly widening, many farmers are asking if they cannot save a considerable share of the cost of their installations by purchasing equipment direct from manufacturer or jobber and installing it themselves, instead of arranging for a contractor or dealer to supply and install it. "That way we can save the middleman's profit," they argue, "And the cost of a lot of skilled labor."

A Well Trained Scotch Collie is Valuable on a Stock Farm

Like many other seemingly general questions, this is one which the farmer must answer for himself, not by any rule or set principle but in the light of his own particular conditions and qualifications. However, there are some considerations which may prove of assistance in arriving at his decision in the matter.

First of all, the farmer must remember that he is a farmer and not an electrician or trained mechanic. Thousands of farmers have considerable mechanical ability. They can repair and care for machinery expertly, with results equal to those attained by professional mechanics. But despite this fact, they are farmers.

For example, a farmer of such ability occupied an entire day repairing a piece of his machinery. Had he engaged a professional mechanic to do the work it would have cost him $4, or possibly $5, and this price he saved. But in devoting his own time to the work he of necessity neglected other work at which, as a farmer, he might have earned $6 or $8. So this is the thing which the farmer must first of all keep in mind when considering installing his own mechanical equipment.

The proposition is exactly the same as that confronted by the business man. He may be able to operate a typewriter and do bookkeeping just as well as any stenographer or bookkeeper he can hire. But because his time as a business man is worth more than as a stenographer or bookkeeper, he hires that part of his work done and devotes himself to his business.

Much the same thing is true with regard to buying electrical equipment for example. When buying thru a contractor or dealer, the farmer has to pay the middleman's profit, it is true. But in attempting to buy on the open market he will find himself in even greater difficulties. So many items enter into the lis of materials necessary for even small installations, and their quantities are so trifling in the aggregate, that often the price of the total, when bought direct, is even greater than that charged by dealer or contractor, because of the superior buying facilities of these middlemen.

Further, the middleman's profit and the labor charge for installations do not represent a very considerable share of the plant's total cost. Modern plants are so compact that the actual installation cost of machinery is trifiling, and the labor charge for the wiring of house and buildings is the only other principal item, and that not great. So even tho the farmer were fortunate in being able to do his own work and buy the plant on proper terms, he would be able to save a relatively inconsiderable share of the plant's final cost. Of course, someone will immediatey come forward with an instance of a farmer who has bought and installed his own electric plant at far less than the price asked by dealers or contractors. Such cases there are, I know. But they are only the exceptions which prove the rule.

In some unusually dull season when he cannot profitably employ his time or energies in the usual farm activity, if he can buy the proper material and equipment at proper prices, and if he has or can acquire the mechanical skill and information necessary to do the work properly, then it may be profitable for a farmer to purchase and install his own electric plant. But normally he will find quite a pleasant balance on the credit side of his books if he permits the electrical men to attend to his electrical plant while he devotes his own time to the work of his farm; for after all, a man is most useful in the field where he is best fitted.—C. M. Adams, Clermont Co., Ohio.

TRAPPING BAITS AND USES

Most trappers use bait. They find it necessary to increase their catch. Some employ natural lures such as foods exclusively while others depend almost wholly upon home-made decoys. A combination of both rightfully employed—the right food and the proper attractor—is perhaps the best fur getter. Then there are patent scents, some of which are excellent and others made to sell rather than draw fur bearers.

The subject of baits has been one of importance to American trappers. With furs higher than ever before, the pelt hunter does not wish to overlook anything to increase his catch. The beginner who often cannot trap a muskrat or skunk—and is unwilling to learn—frequently imagines that all he needs is a bottle of lure to be successful. Some in this class actually complain they cannot catch wolf and fox even tho they have a decoy. Even the best scent cannot overcome the handicap of crude methods.

There is no attractor that will actually drag game into traps. There is no scent which will produce pelts where there are none. Silver Fox cannot be caught in Alabama with the best "draw" ever made. The pelt hunter must remember this when he makes his sets.

Trappers must know the habits of the animals they would take. This will enable them to use a bait when it is necessary and let it alone when not essential. To illustrate, muskrat flesh is one of the best attractors for mink when used properly and a detriment if employed where it creates suspicion. To illustrate, a piece staked near a slide usually results in scaring the animals away.

The pelt hunter must constantly experiment if he wants to get the best results from natural baits. What is good one place or time, may not be under different circumstances. Remember also that for muskrat it is foolish indeed to employ corn when the fur bearers have access to fields of it nearby.

The aim in using lures is to make them appear natural. The pelt hunter knows—or should know—that riffles are natural places for the mink to hunt food. Therefore, the head of a chicken staked at such spots does not generally get many pelts whereas a fish, properly located, to give the appearance of having lodged between some rocks gets the sly animals. It is assumed, of course, that the sets have been properly made for as stated before, the pelt hunter cannot expect results if he leaves signs which can be detected.

There has been much complaint regarding the patent scents. Even the best have come in for their share. Perhaps a large percent of these "kicks" are due to the advertising of the distributors who often lead the novice to believe that the bait is all he needs to get the hides. On the other hand, beginners cannot expect big catches if they know nothing about making sets. And it is these who condemn good decoys because of their ignorance.

A Prize Winning Car in Cordova, Md., Parade to Welcome Soldiers Home

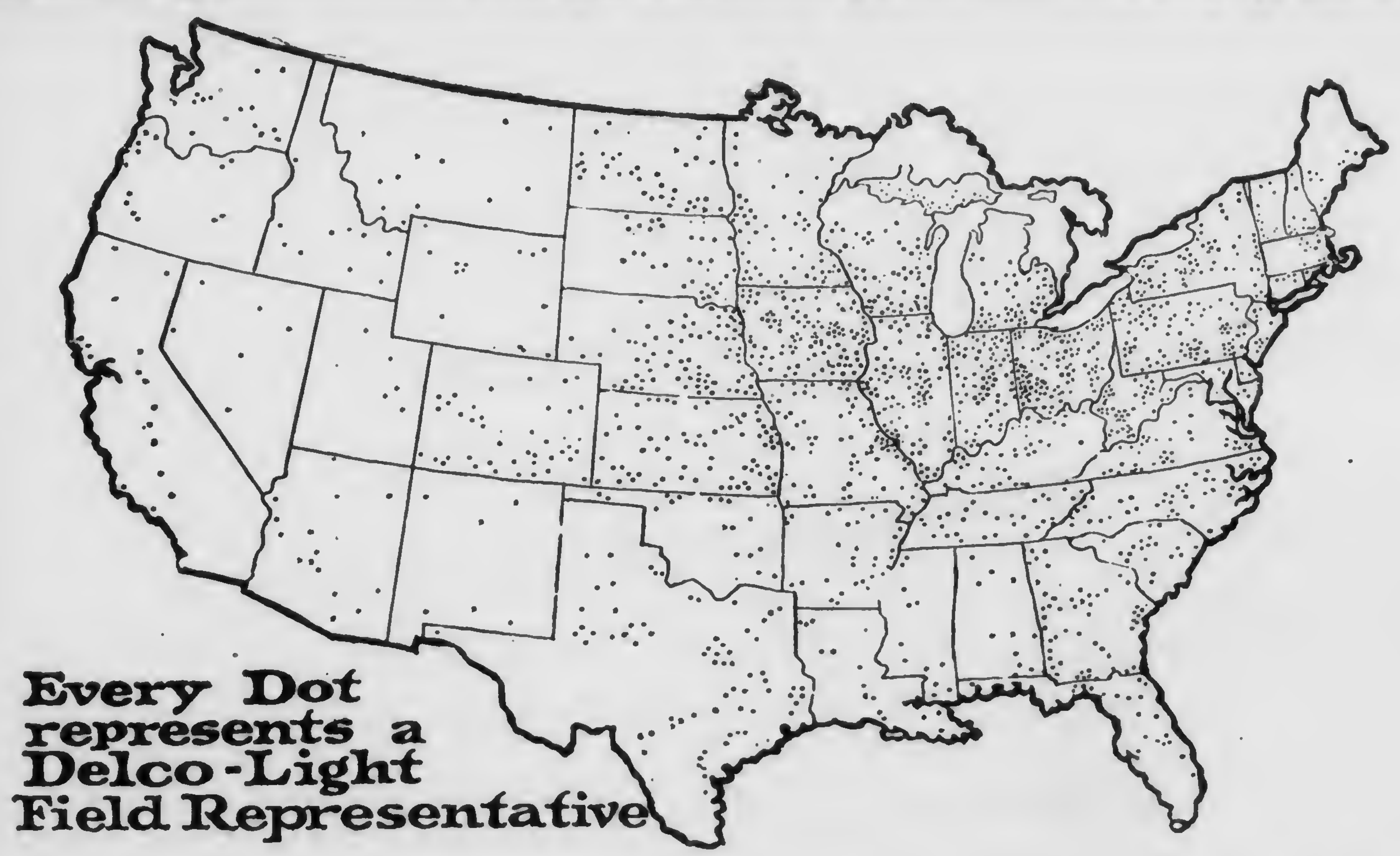
Perhaps there is an explanation as to why so many experts do not get the results they expect from scents. Practically all of the liquids evaporate too rapidly and after five or six hours are so faint that the fur bearers are not drawn unless passing very near. When you stop to consider this fact, it requires no great imagination to determine the value of liquid decoys. Ninety percent of the game is taken from twelve to eighteen hours after sets have been made, so far as the smaller animals are concerned. Longer time must be given the wolf, fox, otter, etc. Imagine traps being arranged in the morning or afternoon and the animals not active until early morning. By this time the scent has become so weakened that it is not effective.

There is another handicap to the old-fashioned scent. This applies equally to the home-made and the patent. Rain, snow, sleet and even frost, affects it too readily. Who wants to tramp miles after every little storm such as we have frequently thru the fur season, to rebait his line? At times it is impossible. Yet the user of liquid decoy must do this in case he wants results, no matter if he has the best scent manufactured.

A word more: There are no magic compounds which pull fur bearers into traps, regardless of what the distributors advertise. On the other hand, here are a number of excellent lures on the market, honest compounds which will increase the catch when properly employed. Without a knowledge of trapping, however, they are worthless. One manufacturer of bait recognizes this so thoroughly that he does not dodge the subject at all but mentions that his product, in common with others, will not do the impossible and it should not be expected of the attractor.—G. J. Thiessen, Ohio.

BRITISH CROP YIELDS DECLINE

The latest estimates of this year's harvest made by the British board of agriculture are not by any means encouraging, says the American Chamber of Commerce in London. Of the cereals, wheat is the best, being only 8 percent below an average year, whilst barley is 13 percent below, and oats 22 percent. The root crops which have an important bearing on the milk supply have also failed to a considerable extent. Turnips and swedes are 21 percent and mangolds 22 percent below the average, tho the hay crops show a percent increase.



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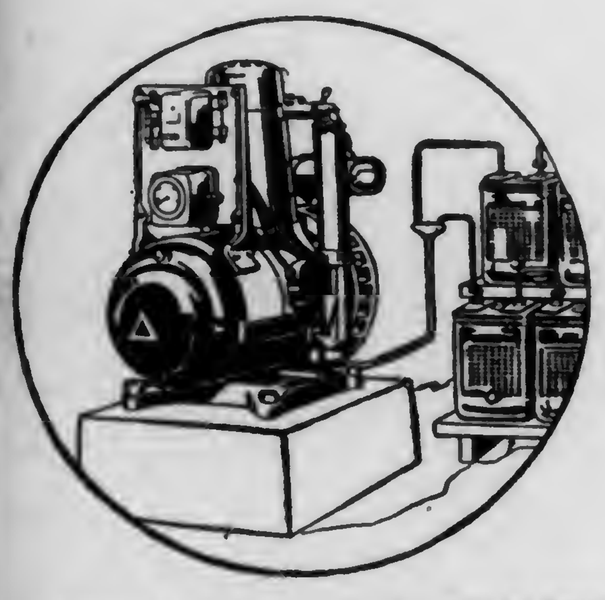
And—After the plant is installed they are always near-by to advise with you and see that you get full hundred per cent satisfaction out of its operation—

Delco-Light is lightening labor, bettering living conditions and actually paying for itself in time and labor saved in more than 75000 farm homes.



A complete electric light and power plant for farms and country homes, self-cranking—air cooled—ball bearings—no belts—only one place to Oil—Thick Plates—Long Lived Battery—RUNS ON KEROSENE.

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Markets

PHILADELPHIA PRODUCE

Philadelphia, Pa., Oct. 13, 1919.

Notwithstanding the fact that supplies of potatoes this week have been the heaviest of the season, there has been a good demand and movement for potatoes athat are showing good quality. The Pennsylvania potatoes are showing very good quality and these are selling generally at $2.50@2.70 per cwt., with some extra fancy potatoes at $2.80@2.90 per cwt. The potatoes coming from New York state, however, are very poor and containing more or less disease and for this reason are selling at much lower prices, most sales being made on a basis of $1.75@2 per cwt., with some at $2.25 per cwt. There have been but very few here from Maine which have been selling at $2.25@2.40 per cwt. New Jersey Giants in 150-lb. sacks sold at $3.35@3.50 per sack this morning for the No. 1's while the No. 2's brought $2.25@2.30. The potatoes hauled in by the nearby farmers remain about steady at 90c@$1.15 per ⅝-basket for No. 1's and No. 2's bringing 50@65c per basket. Sweet potatoes from the Eastern Shore sections are in rather light supply and prices have advanced since last week No. 1's selling today at $3.25@3.75 per barrel, while the No. 2's brought $1.75@2.25 per barrel mostly with a few very fancy No. 2's at $2.50 per barrel.

Vegetables

There are a very few artichokes making their appearance on the market which are selling around $5@10 per 50-quart drum. There is practically no change in the bean market, most of the supplies showing rather poor quality and the market ranges from 25c up to 75c per ⅝-basket, depending upon quality and condition, with not many good enough to bring the top prices. Wax beans are also ranging from 25@75c per basket. Bunch beets are quite a little easier than they were a week ago, and most sales are now being made within a range of 3@3½c per bunch, with an occasional fancy lot up to 4c per bunch. Carrots from New Jersey and Pennsylvania points remain about steady at $2.50@3 per barrel, for the loose carrots while the bunch carrots bring from 2@3c per bunch.

Cabbage is showing very little change from last week, most New York state domestic stock selling at $25@30 per ton and Danish mostly around $35 with some at $40 per ton. The cabbage hauled in by the nearby farmers sells at from 40@65c per ⅝-basket. Cauliflower is a little bit higher. The New York State stock is selling at $1.50@2.25 per crate. There has been no Long Island cauliflower here since last week's report. New York State celery remains practically unchanged at 25@75c per bunch, but the Kalmazoo, Michigan celery is about 25c per crate lower, selling mostly at $1.25@1.50 per crate with a little at $1.75. There are quite a few New Jersey celery hearts on the market selling mostly at 4@6c per bunch.

Corn is getting poor and showing a very wide range in price. The New Jersey stock is selling all the way from 25c@$1 per basket while the Pennsylvania stock brings from 50c@$2.25 per 100 ears. Fancy cucumbers are firm and higher selling today at $3@3.50 per bushel. Ordinary cucumbers show no improvement at prices ranging from $1@2.25 as to quality. Egg plants are getting scarcer and prices gradually advancing. Best sold today at $1.50 per ⅝-basket with others lower as to quality. Horseradish continues in good demand at the unchanged price of $7@8 per barrel. Lettuce is firmer and higher when fancy with sales ranging from $1@2.

Most of the lettuce being offered however is poor to fair in quality and the bulk in sales are being made from 75c@$1.50 per box with some very poor as low as 25c. Lima beans show another gain over last week's advance and are now selling at $1.50@2 per ⅝-basket and $2.50@3 per bushel hamper. Mushrooms sold today up to $4 per 3-lb. basket but this price is extreme as the market has generally been ranging from $2@3 per basket. The cooler weather is helping out the onion market. One car of New York State onions sold this morning at $3.50 per cwt., while other sales range from $3@3.25 per cwt. With No. 2 at $1.75. Parsley is a little firmer at 75c@$1.50 per bushel hamper. Fancy peas are scarce and when here readily bring $3@4 per hamper but poor ones are hard to move at $1.50@2.50 per hamper. Green peppers are about steady at 30@40c per ⅝-basket and red peppers are practically at 40@60c per basket. Romaine shows little or no change at 50c@$1 per box. Radishes are doing a little better at $1.50@2 per 100 bunches. New Jersey tomatoes continue to sell mostly at $1@1.75 per ⅝-basket with strictly fancy at $2@2.25 and occasional exceptional lots still higher. Quite a few hot house tomatoes are arriving and selling mostly at 10@20c per pound, except for some which are soft and over ripe which sell at lower prices. New Jersey and Pennsylvania white turnips are in fair demand from 35@60c; per ⅝-basket, while Pennsylvania yellow turnips or rutabagas sell at 75@90c per basket. New Jersey spinach is quite plentiful but moving out steadily at 15@40c per basket.

Fruits

Since our last week's report the supplies of apples have been much more liberal, and prices are therefore showing some decline over values prevailing a week ago. There are still but a comparatively few nearby New Jersey apples on the market and these are selling mostly at 75c@$1.75 per ⅝-bushel basket as to variety and quality with now and then some extra fancy whilh bring a little more. The bulk of the apples are coming from Pennsylvania, Virginia, West Virginia and New York State with a few from Maine and New Hampshire and a few from Maryland. At the decline in price the market is ruling about steady; and we do not look for much if any further drop in price, and in fact some of the large receivers are anticipating a reaction to a slight extent. At this writing the range of values is about as follows: York Imperials, $3@7; Ben Davis, $3@6; Hubbardsons, $5@7; Stayman Winesaps, $4@7; fancy 3-inch Stayman Winesaps, $7.50; Ganos, $5@6.50; Champion, $5@7; Delicious, $6@9; Jonathans, $4@8.25; Smith Cider, $5@6.50; Grimes Golden, $4@7.50. Other odd varieties $3@5. Box apples are selling from $2@3.50 on Jonathans; $2.20@3.35 on Rome Beauty; and $2.30@3.75 on Winter Bananas. Pears are in light supply and about steady at $3@4.25 per bushel on Bartletts, with Keiffers bringing $1@2 per bushel and $5@6 per barrel. The sugar shortage is having a serious effect on crabapples and quinces, price on which are much lower. Crabapples now only bringing $6@9 per barrel when about a week or 10 days ago they were selling up to $15 per barrel. Quinces are also much lower, the best only bringing around $1.25@1.75 per bushel. Grapes are doing better, the large jumbo baskets of Concords selling at 95c@$1, while the small pony baskets bring 22@24c. The large Jumbo baskets of Niagaras sold today at 85@90c, and the pony baskets at 22c. Chestnuts have been in abundant supply and the market took a sharp drop and at the close of last week the market ranged from 5@8c per pound as against 20@22c at the beginning of the week. Today the market appears to be doing better and sales were being made at 7@10c per pound, and it looks as though still higher prices would prevail.

Poultry

There has been quite some improvement in the live poultry market during the past week. The low prices prevailing seemed to stimulate demand and the market was entirely cleaned up. Prices have advanced at least 3 cents per pound on both fowls and chickens over values prevailing one week ago. At this writing fowls are selling at 28@34c per pound with exceptional lots higher. Chickens are selling generally at 27@32c, with an occasional extra fancy lot a little higher. Old roosters are about steady at 23@25c, and ducks are firm at last week's basis of 27@30c per pound.

Eggs

The egg market is showing practically no change in price but the feeling is very firm, and strictly fancy new laid eggs are commanding a premium over quotations which are about as follows: Pennsylvania and other nearby current receipts 62c; nearby firsts, 64c; western firsts, 62c; western extra firsts at 64c.

LANCASTER PRODUCE MARKETS

Lancaster, Pa., Oct. 13, 1919.

Apple and egg prices went "out of sight" here today, with inferior quality of fruit bringing forty cents per ½ peck despite a large supply, and eggs selling for 70 cents per dozen. All other prices were firmly held and the general demand for produce was good.

Butter and Eggs.—Creamery butter, 70c per lb.; country butter, 65@70c per lb.; fresh eggs, 68@70c per dozen; duck eggs, 60c per dozen; goose eggs, 10 cents each.

Poultry.—Dressed old chickens, $1.75@2.50 each; dressed young chickens, 65c@$1.30 each.

Vegetables.—Corn, 10@25c dozen; beets, 5c bunch; beans, 10@12c ½ peck; tomatoes, $1 basket; do., 6@8c box; lima beans, 20c quart; cauliflower, 20c head; cabbage, 5@10c head; sweet potatoes, 35c ½ peck; potatoes, $1.75@2 bushel; do., 30c ½ peck; turnips, 15c ½ peck; spinach, 20c ½ peck; parsnips, 5c box.

Fruit.—Apples, 40@60c ½ peck; peaches, 15c box; watermelons, 35@85c each; cantaloupes, 5@8c each; pears, 20@25c ½ peck.

Grain Market.—Wheat,$ 2.30 bushel; rye, $1.65; oats, 65c; corn, $1.95; Timothy hay, $30 per ton; wheat straw, $10; oat straw, $5; mixed hay, $28.

BALTIMORE PRODUCE

Baltimore, Md., Oct. 13, 1919.

Butter.—Creamery, western fancy, 65@66c; choice, 64@65c; pound prints, 65@66. Nearby rolls, 44@45c. Dairy prints, 44@45c.

Eggs.—State, Pennsylvania and nearby, 57@58c; Eastern Shore and Virginia, 55@56; Southern, 54@55c.

Live Poultry.—Springers, 32c lb.; old roosters, 21@22c; old hens, 32c lb.; ducks, young, 26@28c; do., poor, 24@25c; guinea fowls, 70@75c.

Grains.—Bag lots by sample, $2.09@2.30. Wheat, new, No. 1 red, $2.30 do., No. 3, $2.31¾; garlicky, $2.29; Corn, $1.82. Oats, standard, white, 75@78c; rye, nearby, $1@1.50.

Hay.—No. 1 timothy, $31 ton; do., standard, $30 ton; light clover, mixed, $29@30 ton. Clover, mixed, $28. Tangled rye straw, $14.50. Wheat straw, $12@13 ton. Oat straw, $14@15 ton.

Western Spring Bran, per ton, in 100-pound sacks, $44@45; City Mills Winter Bran, per ton, in 100-pound sacks, $60; brown middlings, per ton, in 100-pound sacks, $63; white middlings, per ton, in 80-pound sacks, $73. Quotations on City Mills feeds are jobbing prices.

NEW YORK PRODUCE

New York City, Oct. 13, 1919.

Butter.—Easier; receipts, 11,861 packages; creamery, higher than extras, 66½@67c; creamery extras, 92 score, 65½@66c; firsts, 54@65½c; packing stock, current make; No. 2, 46c.

Eggs.—Unsettled; receipts, 15,988 cases; fresh-gathered extras, 66@67c; extra firsts, 63@65c; firsts, 60@62c; State, Pennsylvania and nearby western hennery whites, fine to fancy, 83@86c; State, Pennsylvania and nearby hennery whites, ordinary to prime, 65@81c; state, Pennsylvania and nearby hennery browns, 70@73c; do., gathered browns and mixed colors, 60@65c.

Cheese.—Steady; receipts, 2,831; state, whole-milk, flats, current makes, specials, 30½@31½c; do., average run, 30@30¼c; state, whole-milk twins, current make, specials, 30@30½c; do., average run, 29½@29¾c.

Live Poultry.—Easy; chickens, 28c; fowls, 27@34c; old roosters, 18c; turkeys, 25@30c.

Dressed Poultry.—Steady; fowls, 25@38c; old roosters, 21@22c; chickens, 25@43c; turkeys, 38@45c.

Vegetables.—Potatoes, Long Island, $4.25@5 per 165-lb. bag; Jersey No. 1, $3.25@3.75 bag. Beans, green, 50c@$1.25 basket; do., lima, $1@2 basket. Beets, $2@2.50 per barrel. Carrots, $1.50@2 per bbl. Cabbage, $4@7 per 100. Lettuce, 50c@$1.50 basket. Tomatoes $1@2 per bushel. New Jersey $1@2 carrier.

Fruit.—Apples McIntosh, $4@9; Wealthy, $5@8.50. Baldwin, $3.50@6; Jonathan, $6@7.50.

PITTSBURGH PRODUCE

Pittsburgh, Pa., Oct. 13, 1919.

Butter.—Prints, 69½@70c; tubs, 68½@69c; cooking, 47@49c.

Eggs.—Fresh, select, 59@60c dozen. Candled, 57@58c.

Poultry.—Live; hens, 31@32c lb.; roosters, 20@21c; springers, 33@34c; turkeys, 38@40c. Dressed; hens, 40@41c; roosters, 22@24c; ducks 43@45c; turkeys, 55@57c.

Vegetables.—Potatoes, sack, $3.25@4.25; onions, sacks, $3.75@4.25; cabbage, bushel, 90c@$1; corn, basket, 75c@$1; celery, 35@50c dozen; tomatoes, 25@35c; lima beans, quart, 25@30c.

Fruits.—Apples, $3@3.50 bu. Cantaloupes, $2.50@3 crate; peaches, $2.25@3.50 bu.; grapes, 38@40c basket; quinces, $3.25@3.75 bushel.

PHILADELPHIA LIVE STOCK

Philadelphia, Pa., Oct. 13, 1919.

Receipts of live stock for week ending October 11 were as follows:

	Beef Cattle	Sheep and Lambs	Hogs
Total for Week	2,489	8,321	6,422
Previous Week	2,266	6,034	6,397

Calves.—Receipts of calves last week were 1,646 head against 1,244 head week previous.

Beef Cattle.—Steers and cows ruled steady under moderate offerings and a fair demand. Calves were weak and easier, with offerings in excess of requirements. Steers, good to choice, $14.50@16; do., fair to good, $12.50@14.50; common to fair, $11@12.50; cows, fat per lb., good to choice, cornfed, 9@10½c; fair to good, 7½@9c; do. common to fair, 6½@7½c; calves, extra, choice, $23@23.50; fair to good, $19@21; common, $12.50@16.50; heavy, $8.50@12.50; Tennessee, choice, $18@20; other southern, $9@13.

Sheep and Lambs.—Offerings of sheep were moderate and the market ruled steady, but trade was quiet. Lambs were weak and lower, due to an unsatisfactory demand and free offerings. Sheared sheep, wethers, extra, $10.50@11; good to choice, $9@10; medium, $7@8; common, $3.50@5; ewes, fat, heavy, $7.50@8.50; spring lambs, choice $15.50@16; medium, $13.50@14.50; culls and common, $11@13.

Hogs.—The market ruled weak and lower, due to a light demand, easeir western advices and increased pressure, to sell. Quotations for best western, $18.50; nearby, good, $15@16.50.

City Dressed Stock.—The market for steers, heifers and cows ruled firm and higher, with demand absorbing the offerings of fine stock. Calves and lambs were dull and barely steady, with fairly liberal supplies. Hogs ruled weak and lower, due to a slow demand and increased pressure to sell. Quotations: Steers, 18@25c; heifers, 16@22c; cows, 12@18c; calves city dressed, choice, 28@30c; country dressed, 26@28c; sheep, 18@22c; lambs, spring, 25@28c; hogs, 24c.

LIVESTOCK

Lancaster, Pa., Oct. 13.—Cattle.—Receipts, 9,120, against 8,340 last Monday; market quiet; many unsold; prices lower; good to prime steers, $14@15.25; medium to good steers, $12.60@14; common to medium steers, $11@12.50; good to prime heifers, $12.25@13.25; medium to good heifers, $9.50@10.25; common to medium heifers, $7.25@9.25; good to prime cows, $10@11.85; fair to good cows, $8@9.25; common to medium cows, $5@6.25; good to choice bulls, $10.25@11.25; fair to good bulls, $9@10.25; common to medium bulls, $7.50@8.90; good to choice oxen, $10@11.90; common to fair oxen, $6@8.50; common to choice calves, $18@21; medium grades, $14@17; good to choice feeding steers, $10.25@12; common to fair feeders, $8.50@10.25; good to choice stockers, $10@11.25; common to medium stockers, $7@9; stock bulls, choice, $9@11; common, $6.50@8; good stock heifers, $8@9.50; common grades, $6.50@8.25.

Hogs.—Receipts, 274; market brisk; prices steady; good to prime, $17@18; light to medium, $16@17; roughs, $14@15; stags to sows, $14@15.25.

New York City, Oct. 14.—Beeves.—Receipts, 4,470 steady; steers, $9.50@17; bulls, $6.50@9; cows, $4@9.50.

Calves.—Receipts, 2,740; steady; veals, $16.50@24; culls, $12@16; skim-milk and fed calves, $8.50@13; grassers, $7@8; yearlings, $6@7; westerns, $8.50@12.50.

Sheep and Lambs.—Receipts, 17,210; steady; sheep, $4.50@8.50; culls, $3@4; lambs, $11@15; culls, $8@11.

Hogs.—Receipts, 5,090; no trading.

PHILADELPHIA HAY AND GRAIN

Philadelphia, Pa., Oct. 13, 1919.

Baled Hay and Straw.—Receipts, 72 tons of hay. Quiet and prices favored buyers. Timothy hay, No. 1, $32; No. 2, $28@30; No. 3, $24@27; clover-mixed hay, light mixed, $28@30; No. 1 mixed, $26@27; straw, No. 1 straight rye, $14.50; No. 2 do., $12.50@13; No. 1 tangled rye straw, $13; No. 2 do., $12@12.50; No. 1 wheat straw, $12.50@13; No. 2 do., $11.50@12; No. 1 oat straw, $12.50@13; No. 2 do., $11.50@12.

Bran.—Dull and weak. We quote: Car lots, to arrive, including sacks, western solt winter bran, in 100-lb. sacks, per ton, $43@44 spring bran, in 100-lb. sacks, per ton, $42@43.

Corn.—Yellow, to arrive, $1.70@1.75.

Oats.—No. 2, white, 80@80½c; No. 3, 79@79½c.

NEW YORK HAY AND GRAIN

New York City, Oct. 13, 1919.

Feed.—The market for mill feed was weak owing to continued heavy offers by the mills, who are evidently trying desperately to find an outlet for their output. At the same time, buyers were indifferent and they have been encouraged by the recent decline in values.

Quotations: City feed bran, $43; middlings, $58, in 100-pound sacks; red dog, $69, nominal, in 100-pound sacks; Western spring bran, $41.50; standard middlings, $47.50@48; flour middlings, $50@60; red dog, $58@69, all in 100-pound sacks, 30-day shipments. Oat feed, $30@31; rye middlings, $52; white hominy feed, nominal, all in 100-pound sacks. Cottonseed oil meal, October shipment, $12; linseed oil meal, $73, in 100-pound sacks.

Hay and Straw.—The market is without improvement at 33d Street shed. In Brooklyn the situation is irregular; a strike of hay handlers at Brooklyn Eastern District Terminal has tied up the situation there and this extra demand will probably have its effect upon the hay at Bushwick. Rye straw is selling largely at $15, some Jersey down to $14. A little wheat straw in on the boat sold at $13, and several cars of oat straw on the market are held at $16, tho this seems a little extreme.

Hay.—No. 1 large bales, $33@34 ton. No. 2, $29@31 ton; No. 3, $26@28; shipping, $24@25 ton. Fancy light clover mixed, $30 ton. Clover, No. 1, mixed, $27@29.

Straw.—Per ton, No. 1 rye, $16; No. 1 oat, $14.

Wheat.—No. 2 red, $2.37½; No. 2 hard winter, $2.37½.

Corn.—No. 2 yellow, $1.56¾; No. 3 yellow, $1.56¼.

Oats.—No. 2 white, 81½c; No. 3 white, 61c.

Rye.—Export, $1.53¼.

PITTSBURGH HAY AND GRAIN

Pittsburgh, Pa., Oct. 13, 1919.

Hay.—No. 1 timothy, $29.50@30; No. 2, $28@28.50; No. 3, $25@27; No. 1 light mixed, $29.50; No. 1 clover mixed, $30@31.50; New No. 2 clover mixed, $26@28.

Straw.—Wheat straw in light demand, oat straw wanted.

No. 1 oat, $11.50@12; No. 2, $11@11.50; No. 1 wheat, $11@11.50; No. 2, $10.50@11; No. 1 rye, $11.50@12; No. 2, $11@11.50.

Ear Corn.—Arrivals, very few. Market quiet.

Oats.—Receipts about equal demand. Market steady. No. 1 white, 77@77½c; No. 2, 76½@76¾c; No. 3 white, 75@75½c.

CHICAGO GRAIN

Chicago, Ill., Oct. 13, 1919.

Closing prices were as follows:

Corn.—No. 2 mixed, $1.41½@1.42; No. 2 yellow, $1.41@1.42.

Oats.—No. 2 white, 71½@72¼c; No. 3 white, 69¼@71c.

Rye.—No. 2, $1.42. Barley, $1.22@1.34. Timothy, $8.50@11.25. Clover nominal. Pork nominal. Lard, $28.12@28.20. Ribs, $17.75@18.50.

PHILADELPHIA DAIRY MARKET

Philadelphia, Pa., Oct. 13, 1919.

Butter.—Receipts, 2,224 tubs. The Produce Exchange was closed and there was virtually no wholesale trading. Prices, however, were firmly held on fine stock. The quotations: Fresh, solid-packed creamery, fancy, high-scoring goods, 67@69c, the latter for jobbing sales; extras, 66c; extra firsts, 62@65c; firsts, 55@59c; seconds, 51@54c; sweet creamery, choice and fancy, 68@70c; do., fair to good, 59@67c; ladle packed, as to quality, 48@50c; packing stock, 46@47c; fancy brands of nearby prints jobbing at 72@74c; good to choice, 64@71c; fair, 58@62c.

Cheese.—Firmly held. The quotations were as follows, New York, whole-milk flats, fancy, 31¾@32c; fair to good, 30½@31½c; Wisconsin, whole-milk flats, fancy, 31¼c; fair to good, 30@31c; jobbing sales of fancy goods, 32¼@33c.

NEW YORK MILK MARKET

New York City, Oct. 13, 1919.

Market continued flush and with trade rather dull, surplus still heavy. The October rate for 3 percent milk in 200 mile zone is $3.11 per 100 lbs.; 3.06 percent milk is $3.35, and 4 percent $3.51.

Receipts of milk and cream in 40-quart cans for the week ending October 11th, 1919 were as follows:

Railroad	Milk	Cream
Erie	41,940	4,110
Susquehanna	6,172	88
West Shore	15,226	1,020
Lackawanna	60,470	2,752
N. Y. Central (long haul)	149,920	2,214
Ontario	48,100	2,109
Lehigh Valley	44,579	1,018
New Haven	6,622	80
Pennsylvania	12,110	472
Other Sources	6,000	250
Totals	391,139	15,013
Same week last year	365,789	12,206

CLOVERSEED

Toledo, O., Oct. 13.—Cloverseed.—Prime, cash, $31; October, $31; December, $30.30; January, $30.45; February, $30.60; March, $30.50.

Alsike.—Prime, cash, $29.50; October, $29.50; December, $29.30; March, $29.50.

Timothy.—Prime, cash, 1917, $5.35; cash, 1918, $5.35; cash, 1919, $5.60; October, $5.65; December, $5.65; March, $5.75; April, $5.75.

TOBACCO MARKET

Jack Frost has been shy this fall, much to satisfaction of tobacco circles and to the prospect of good prices. Now practically the whole crop is safely housed and curing nicely under the influence of favorable weather. The coterie of speculators who await the opportunity of buying damaged tobacco will themselves be "frosted" this time. It has been reported that many crops have been contracted but reliable information to that effect was unobtainable. Growers do not care to sell or even to consider offers on account of the existing favorable price outlook. With a short acreage, a short yield and prevailing good quality it is no time to trifle with chances of which the buyer is in position to judge better than the seller. It is a time to await developments. A feature of the week was the sale of some 1,150 cases of 1918 tobacco to a prominent manufacturer. The price was not made known but was conceded to be about $20 per cwt. thru. Tobacco circles have been greatly influenced by prevailing high and advancing prices on southern markets. Opening lower than last year this loss was soon regained and it is now estimated that the general average price here is about $5 per cwt higher than at the corresponding time last year. Those southern markets, however, are for chewing, smoking, snuff and export types and not for cigar types, hence the bearing upon the latter is only general but can be taken as a favorable indication. A high point in one of those sales was a lot which went at $105 per cwt. a price which was unusual even last season in the time of soaring values. At another point 1,000,000 pounds has been sold at an average of $44.86 per cwt.

Farm Products Prices and Prospects

THE 1919 POTATO CROP

This year's potato crop will fall below early estimates. A large acreage of late potatoes was planted, but dry weather cut down the yield of the western potato crop, while the eastern crop was reduced somewhat by blight, rot and insects. The net result is an estimated yield of 284,605,000 bushels according to the September report of the Bureau of Crop Estimates, compared with 340,699,000 bushels last year, 368,325,000 bushels the year before, and 229,415,000 bushels in the short crop year of 1916. The production is about medium; below the liberal one of last year, and above the well remembered shortage of 1916.

The sixteen principal northern late shipping states would have a commercial crop available for shipment of 125,518 cars, compared with 146,048 cars last year, which would represent a decrease of 15 percent. The losses compared with last year range from 6 percent in the leading eastern shipping states, to about 13 percent in the Great Lakes region and the Pacific Northwest.

The early shipments from these sixteen leading states are 1256 cars more than for last season to corresponding date, altho the estimate crop available for shipment is much less this season. The activity so early in the season may be due partly to the fairly high range of prices and partly to early maturity of the crop in some states. The heaviest comparative gains in shipments from these sixteen states so far were for Maine and the Great Lakes region. These states have crops not far below last year. The West and Northwest is shipping much below last year, as might be expected because of the light yield. The chief exceptions are North Dakota and Washington, both of which show a considerable increase, altho early totals are not large from either state.

New Jersey Giants and Cobblers and Minnesota Early Ohios this season have comprised a large share of the carlot movement in August and early September. Stock from these states was often more than one-half the entire weekly volume of shipments during these months. The good demand and fairly high prices prevailing at the time led to an early active movement. New Jersey Giants were moving liberally in August when potatoes were in comparatively light supply, and sold the first to the middle of the month at $3.15@3.75 per cwt. f. o. b. shipping points. This range was about $1 higher than prevailed at the corresponding time in 1918 By the last of September the jobbing range had reached $2@2.65, compared with $2.65@3.25 the year before. Western markets were better sustained this season than eastern markets, as a rule. Last year the first signs of weakness were shown in middlewestern markets owing to heavy supplies from the Great Lakes region. This season, movement has been moderate to middlewestern markets, and values have been fairly well sustained. These conditions are shown by the range of Minnesota Early Ohios which supplied middlewestern markets liberally during August and early September. This stock began in early August at $2.75@3.90 f. o. b. shipping points. It appeared about two weeks later in consuming markets at a relative decline to a range of $2.70@3.50 per cwt., jobbing sales, compared with $2.25@2.50 for carlot sales per cwt. at corresponding time in 1918. The gradual decline continued, reaching $2.25@3 for jobbing sales in leading markets the week of September 22nd compared with $1.60@2.23 per cwt. for carlot sales in Chicago a year ago.

UPHOLD FARM-LOAN ACT

A defense of the Farm-Loan Act has made its appearance in the form of a legal opinion by W. Wickersham and W. G. McAdoo, former members of the cabinet. Some of the points which they raise may have a bearing on other proposed activities of the Federal Government along lines similar to the federal farm loan measure.

The opinion says, in part:

"While fully conscious of the danger of attempting to forecast the decision of the courts in a pending litigation, we are of the opinion that Congress did not exceed its powers in the enactment of the federal farm loan act and that the provisions authorizing the incorporation of the federal land banks and the joint stock land banks and empowering them to issue bonds which shall be exempt from taxation are not unconstitutional, and we feel confident that it will be so decided in the suit referred to.

"The statute in question was enacted by Congress after an investigation into the general subject of rural credits covering a period of more than three years. The investigation revealed the facts that the average rate of interest on farm loan mortgages in the United States ran from 5.3 percent in New Hampshire to 9 percent and even 10 percent in certain southern and western states, and further that such mortgages were rarely of a sufficintly long term to permit of reasonable amortization by the borrowers. It was further established that in comparison with European countries the United States had been unusually backward in lending governmenal aid or encouragement to the facilitation of farm credits.

"In our opinion the creation by Congress of the Federal Land Banks and the Joint Stock Land Banks is a valid exercise of a constitutional power for the same reasons as the creation of the National Banks is a valid exercise of such power; that they are appropriate instruments to aid in carrying on the fiscal operations of the federal government. Both the national banks and the land banks are vested with public functions; that is, both are authorized to act as depositaries and financial agents of the government. In addition, the national banks are empowered to do a general banking business. The only distinction is in the score of the private functions. The national banks in their private aspect are commercial credit institutions; the land banks are agricultural credit institutions.

"In one particular, the land banks have a close relation to the credit of the government itself. One of the stated purposes of the act is to create a market for United States bonds. The banks are authorized to buy and sell these securities and to use them as collateral security for their own bonds in lieu of mortgages."

Touching on the tax exemption provisions, the opinion says:

"We have no doubt as to the validity of this exemption. Congress, having the power to create government depositories and financial agents, can define the privileges which they shall enjoy under federal law, and may exercise from the operation of its own tax legislation their securities and the income arising therefrom."

MUST FIGHT FOR COLLECTIVE BARGAINING

The Capper-Hersman bill is making friends every day, because of the enemies it has. A clever effort was staged in the house the past week to discredit collective bargaining by means of an attack on Union Labor for its radical position in the steel strike still in progress, and making it appear that farmers' collective bargaining, and Labors' collective bargaining, and Labor's collective sible. Many newspapers, like hounds on a new scent, took up the cry, and for a few days a barrage of editorials directed at "class legislation" obscured clear vision. But the Capper-Hersman bill is not an effort to put something new into law. The right of industrial workers to bargain collectively for their labor and of farmers to bargain collectively for the products of their labor is one and the same right and is now on the statute books, placed there a half decade ago as a statement and exposition of national policy. If it is a national policy to protect labor in this right, farmers have the same right and demand its protection. The present bill, the Capper-Hersman bill, is being pressed for passage not to secure anything new or different but solely to clarify the language, and clearly limit and define this right which is possessed by farmers equally with industrial workers, in shops and factories. Thinking people in every class realize that this is true. Farmers' organizations need to be more alert to make more people think.

NO ORGANIZATION AND BOTTOM PRICES

Tomato growers of Kent County are compelled to sell their short crop of tomatoes at low prices, even as low as 30 cents a basket. There are reasons for this bad situation; no Tomato Growers' Association, no paid Sales' Managers, only one-fifth of the normal crop; 30 cents per basket. The fertilizer purchased in the spring was expensive; it is a question whether enough money will be realized to pay for it.

We often hear of a "lost opportunity." Growers of Kent County had a thrilling opportunity to form an organization. A mass meeting was held in Chestertown last winter and prominent Association men from Dorchester and Somerset counties came and told of the purposes and methods of a Tomato Growers' Assocaion. The meeting created enthusiasm but for some reason the organization failed to materialize. The Associations in other counties, while they too, are handling small crops, decided to stay in the open market, because of this they have saved thousands of dollars. By the directors adopting the open market policy the members of the Association will be able to pay at least for the production of their crops, even tho there may not be a profit. This has been the poorest tomato season in years.
—Marylander.

ARGENTINA PLANS MEAT EXPORT BAN

If the bill presented to the Argentine Congress by the administration is passed shippers from that country will be prohibited from exporting the meat of cows or calves for a period of three years. This drastic measure has been proposed in order to prevent further inroads on Argentine's cattle supply. Farmers have been killing their cows and calves for meat owing to the high prices obtainable in the foreign markets, and as a result the number of cows has been diminishing.

The same measure is proposed in the matter of sugar exportations. The government believes it is necessary to have the greatest quantity of sugar possible in the domestic market in order that the high cost of living may be reduced.

In connection with these proposed measures, the government announces that this is a first series of steps to be taken to endeavor to cut down the high living costs as far as it is consistent with the demand for the necessities of life.

FARMERS' CONGRESS

Arrangements are being completed for the greatest meeting of farmers ever held in the East at Hagerstown October 27 to 31, when the Farmers' National Congress and the Maryland Agricultural Society and affiliated associations will convene in annual session. Several prominent speakers have accepted invitations to be present and others have been invited.

Special arrangements have been made for a splendid agricultural and industrial exhibit by the Washington County Agricultural Association. It will be primarily a county exhibit and State prizes in fruit, grain, vegetables and other products are being offered. Many large exhibits from all sections of the state also have been entered.

HOLSTEIN BREEDERS ORGANIZE

Some of the dairymen of Potter County, Pa., started on the road to real prosperity when they met September 12th and organized a County Holstein-Friesian Breeders' Association with forty-eight members. Fourteen townships were represented and vice-presidents for each were elected.

Members reported owning 398 pure-breds and 513 grades. Many of the pure-bred herds of the county were not represented and so were not reported. L. S. Dibble was elected president; Frank Dunshie, treasurer; and H. H. Hall, secretary.

KEZIAH COFFIN

By JOSEPH C. LINCOLN

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SYNOPSIS

Keziah Coffin, a good-natured widow, is packing up to leave the fishing village to go to Boston, her brother having died and left her alone. Grace Von Horne, ward of Eben Hammond and young friend of Keziah, is assisting her. They are discussing the coming of the new minister for the "Regular" Church, to which denomination Keziah belongs. Grace is a member of the "Come-Outers," a rival set. Between the two a jealous rivalry exists. As the two women work "Kyan" Pepper, a widower comes in and proposes to Keziah, only to be ridiculed. Eben Hammond calls and induces Keziah to become housekeeper for the new and single minister. She accepts and Grace goes with her to prepare the house for his coming. The new minister arrives and he and Keziah become friends at once. Keziah proceeds to make him acquainted with local conditions—especially the strained relations between the two sects. He reads his first sermon to her and she offers some amendments. The first sermon is pronounced a success. Mrs. Coffin advises him that if he wishes to steer an easy course he must recognize the "classes" of the community, and also not to fraternize with the "Come-Outers."

Ellery decided that he should like Captain Zeb, altho it was evident that the old whaler had decided opinions of his own which he did not hesitate to express. He judged that the Mayos were of the so-called aristocracy, but undoubtedly unique specimens. He visited four more households that afternoon. The last call was at Mrs. Thankful Payne's, and while there, listening to the wonderful "poem," he saw Miss Van Horne pass the window, as has already been told. He came home to a Cape Cod supper of scalloped clams, hot biscuits, and baked Indian pudding, and Keziah greeted him with a cherry smile which made him feel that it was home. His summary disposal of the "chart" had evidently raised him in his housekeeper's estimation. She did not ask a single question as to where he had been.

Next day he had a taste of Trumet's real aristocracy, the genuine article. Captain Elkanah Daniels and his daughter made their first formal call. The captain was majestic in high hat, fur-collared cape, tailed coat, and carrying a gold-headed cane. Miss Annabel wore her newest gown and bonnet and rustled as she walked. They entered the sitting room and the lady glanced superciliously about the apartment.

"Hum—ha!" barked Captain Elkanah. "Ahem! Mr. Ellery, I trust you're being made comfortable. The parish committee are—hum—ah—anxious that you should be. Yes?"

The minister said that he was very comfortable indeed.

"It isn't what you've been used to, we know," observed Miss Annabel. "Mr. Langley, our former pastor, was a sweet old gentleman, but he was old-fashioned and his tastes were queer, especially in art. Have you noticed that 'fruit piece' in the dining room? Isn't it too ridiculous?"

Ellery admitted that the fruit piece was rather funny; but no doubt it had been a gift and so—

"Yes, indeed. I guess it was a present, fast enough. Nobody would buy such a thing. It seems strange to pa and me that, altho so many of our people have been abroad, they have such strange ideas of art. Do you remember the beautiful marbles in the palaces at Florence, Mr. Ellery? Of course you've seen them?"

The minister was obliged to admit that he had never been abroad.

"Oh, is that so? I've been so many times with pa that it seems almost as if everybody was as familiar with Yurrup as I am. You remember what I said about the marbles, Pa?"

Her parent nodded.

"Hum—ha! Oh, yes, yes," he said. "That was when I was in the fruit-carrying trade and made a voyage to Valenchy."

"Valencia, pa," corrected Annabel. "And Valencia is in Spain."

"I know it. But we went to Leghorn afterwards. I sailed to Cronstadt for some years regular. Cronstadt is in Rooshy, Mr. Ellery."

"Russia, pa," snapped his daughter. Then she changed the subject to church and parish affairs. They spoke of the sewing circle and the reading society and the Friday-evening meetings.

"The Come-Outers are so vexed with us," tittered Miss Annabel, "that they won't even hold prayer meeting on the same night as ours. They have theirs on Thursday nights and it's as good as a play to hear them shout and sing and carry on. You'll enjoy the Come-Outers, Mr. Ellery. They're a perfect delight."

And as they rose to go Captain Elkanah asked:

"Is there anything you'd like done about the parsonage, Mr. Ellery? If so, it shall be done immejitly. How are you satisfied with your housekeeper?"

"Very well, indeed, Captain Daniels," was the prompt reply.

"She's a character, isn't she?" giggled Annabel. "She was born here in Trumet, but went away to New Bedford when she was young and grew up there. Her maiden name was Hall, but while she was away she married a man named Ansel Coffin. They didn't live together very long and weren't happy, I guess. I don't know whose fault it was, nobody knows much of anything about it, for that's the one thing she won't talk about. Anyhow, the Coffin man was lost to sea, and after a while she came back to keep house for her brother Solomon. She's an awful odd stick, but she's a good cook, I believe; tho I'm afraid you won't get the meals people such as ourselves, who've been so much in the city, are used to."

Ellery thought of the meals at his city boarding house and shuddered. He was an orphan and had boarded for years. Incidentally, he had worked his way thru college. Captain Elkanah cleared his throat.

"Keziah," he commanded. "Hum—ha! Keziah, come in here a minute."

Keziah came in response to the call, her sewing in her hand. The renovation of the parsonage had so far progressed that she could now find time for a little sewing, after the dinner dishes were done.

"Keziah," said the captain pompously, "we expect you to look out for Mr. Ellery in every respect. The parish committee expects that—yes."

"I'll try," said Mrs. Coffin shortly.

"Yes. Well, that's all. You can go. We must be going, too, Mr. Ellery. Please consider our house at your disposal any time. Be neighborly—hum—ha!—be neighborly."

"Yes," purred Annabel. "Do come and see us often. Congenial society is very scarce in Trumet, for me especially. We can read together. Are you fond of Moore, Mr. Ellery? I just dote on him."

The last "hum—ha" was partially drowned by the click of the gate. Keziah closed the dining-room door.

"Mrs. Coffin," said the minister, "I shan't trouble the parish committee. Be sure of that. I'm perfectly satisfied."

Keziah sat down in the rocker and her needle moved very briskly for a moment. Then she said, without looking up:

"That's good. I own up I like to hear you say it. And I am glad there are some things I do like about this new place of mine. Because—well, because there's likely to be others that I shan't like at all."

On Friday evening the minister conducted his first prayer meeting. Before it, and afterwards, he heard a good deal concerning the Come-Outers. He learned that Captain Eben Hammond had preached against him in the chapel on Sunday. Most of his own parishioners seemed to think it a good joke.

"Stir 'em up, Mr. Ellery," counseled Lavinia Pepper. "Stir 'em up! Don't be afraid to answer 'em from the pulpit and set 'em where they belong. Ignorant, bigoted things!"

Others gave similar counsel. The result was that the young man became still more interested in these people who seemed to hate him and all he stood for so profoundly. He wished he might hear thier side of the case and judge it for himself. It may as well be acknowledged now that John Ellery had a habit of wishing to judge for himself. This is not always a politic habit in a country minister.

The sun of the following Thursday morning rose behind a curtain of fog as dense as that of the day upon which Ellery arrived. A flat calm in the forenoon, the wind changed about three o'clock and, beginning with a sharp and sudden squall from the northwest, blew hard and steady. Yet the fog still cloaked everything and refused to be blown away.

"There's rain astern," observed Captain Zeb, with the air of authority which belongs to searfaring men when speaking of the weather. "We'll get a hard, driving rain afore mornin', you see. Then, if she still holds from the northwest'ard, it'll fair off fine."

"Goin' out in this, Mr. Ellery!" exclaimed Keziah, in amazement, as the minister put on his hat and coat about seven that evening. "Sakes alive! you won't be able to see the way to the gate. It's as dark as a nigger's pocket and thicker than young ones in a poor man's family, as my father used to say. You'll be wet thru. Where in the world are you bound for this night?"

The minister equivocated. He said he had been in the house all day and felt like a walk.

"Well, take an umbrella, then," was the housekeeper's advice. "You'll need it before you get back, I cal'late."

It was dark enough and thick enough, in all conscience. The main road was a black, wet void, thru which gleams from lighted windows were but vague, yellow blotches. The umbrella was useful in the same way that a blind man's cane is useful, in feeling the way. The two or three stragglers who met the minister carried lanterns. One of these stragglers was Mr. Pepper. Kyan was astonished.

"Well, I snum!" cried Kyan, raising the lantern. "If 'tain't Mr. Ellery. Where you bound this kind of night?"

Before the minister could answer, a stately figure appeared and joined the pair. Lavinia, of course.

"Well, Mr. Ellery," she said, "Ain't you lost, out in this fog? Anybody sick?"

No, no one was sick.

"That's a mercy. Goin' callin', be you?"

"No."

"Hum! Queer weather for a walk, I call it. Won't be many out tonight, except Come-Outers goin' to holler their lungs loose at prayer meeting. He, he! You ain't turned Come-Outer, have you, Mr. Ellery? You've headed right for the chapel."

Ellery's reply was hurried and a bit confused. He said good night and went on.

"Laviny," whispered the shocked Kyan, "do you think that was a—er—polite thing to say to a parson? That about his turnin' Come-Outer? He didn't make much answer, seemed to me. You don't think he was mad, do ye?"

"I don't care if he was," snorted Miss Pepper. "He cold tell a body where he was goin' then. Nobody can snub me, minister or not. I think he's kind of stuck-up, if you want to know, and if he is, he'll get took down in a hurry. Come along, don't stand there with your mouth open like a flytrap. I'd like to know what he was up to. I've a precious good mind to follow him; would if 'twa'n't so much trouble."

She didn't. Yet, if she had, she would have deemed the trouble worth while. For John Ellery stumbled on thru the mist till he reached the "Corners" where the store was located and the roads forked. There, he turned to the right, into the way called locally "Hammond's Turn-off." A short distance down the "Turn-off" stood a small, brown-shingled building, its windows alight. Opposite its door, on the other side of the road, grew a spreading hornbeam tree surrounded by a cluster of swamp blackberry bushes. In the black shadow of the hornbeam Mr. Ellery stood still. He was debating in his mind a question: should he or should he not enter that building?

As he stood there, groups of people emerged from the fog and darkness and passed in at the door. Some of them he had seen during his fortnight in Trumet. Others were strangers to him. A lantern danced and wabbled up the "Turn-off" from the direction of the bay shore and the packet wharf. It drew near, and he saw that it was carried by an old man with long white hair and chin beard, who walked with a slight limp. Beside him was a thin woman wearing a black poke bonnet and a shawl. In the rear of the pair came another woman, a young woman, judging by the way she was dressed and her lithe, vigorous step. The trio halted on the platform of the building. The old man blew out the lantern. Then he threw the door open and a stream of yellow light poured over the group.

The young woman was Grace Van Horne. The minister recognized her at once. Undoubtedly, the old man with the limp was her guardian. Captain Eben Hammond, who, by common report, had spoken of him, Ellery, as a "hired priest."

The door closed. A few moments thereafter the sound of a squeaky melodeon came from within the building. It wailed and quavered and groaned. Then, with a suddenness that was startling, came the first verse of a hymn, sung with tremendous enthusiasm:

"Oh, who shall answer when the
Lord shall call
His ransomed sinners home?"

The hallelujah chorus was still ringing when the watcher across the street stepped out from the shadow of the hornbeam. Without a pause he strode over to the platform. Another moment and the door had shut behind him.

The minister of the Trumet Regular Church had entered the Come-Outer chapel to attend a Come-Outer prayer meeting!

CHAPTER V.

In Which the Parson Cruises in Strange Waters

The Come-Outer chapel was as bare inside, almost, as it was without. Bare wooden walls, a beamed ceiling, a raised platform at one end with a table and chairs and the melodeon upon it, rows of wooden settees for the congregation—that was all. As the minister entered, the worshippers were standing up to sing. Three or four sputtering oil lamps but dimly illumined the place and made recognition uncertain.

The second verse of the hymn was just beginning as Ellery came in. Most of the forty or more grown people in the chapel were too busy wrestling with the tune to turn and look at him. A child here and there in the back row twisted a curious neck but twisted back again as parental fingers tugged at its ear. The minister tiptoed to a dark corner and took his stand in front of a vacant settee.

The man whom Ellery had decided must be Captain Eben Hammond was standing on the low platform beside the table. A quaint figure, patriarchal with its flowing white hair and beard, puritanical with its set, smooth-shaven lips and tufted brows. Captain Eben held an open hymn book back in one hand and beat time with the other. He wore brass-bowed spectacles well down toward the tip of his nose. Swinging a heavy, stubby finger and singing in a high, quavering voice of no particular register, he led off the third verse:

"Oh, who shall weep when the roll
is called
And who shall shout for joy?"

The melodeon and the hymn book were in accord as to the tune, but Captain Eben and the various members of the congregation seemed to have a desire to improvise. They sang with spirit, however, and the rhythmic pat of feet grew louder and louder. Here and there men and women were swaying and rocking their bodies in time to the music. The chorus for each verse was louder than the one preceding it.

Another hymn was given out and sung. And another and still another. The windows rattled. The patting grew to a steady "thump! thump!" Momentary pauses between lines were punctuated by hallelujahs and amens. Standing directly in front of the minister was a six-foot, raw-boned individual whose clothes smelled strongly of fish, and whose hands, each swung at the end of an exposed five inches of hairy red wrist, looked like flippers. At the end of the third hymn this personage sprang straight up into the air, cracked the heels of a pair of red cow-hide boots together and whooped: "Glory be! Send the paower?" in a voice like the screech of a northest gale. Mr. Ellery, whom this gymnastic feat had taken by surprise, jumped in sympathy, altho not as high.

The singing over, the worshippers sat down. Captain Eben took a figured handkerchief from his pocket and wiped his forehead. The thin, near-sighted young woman who had been humped over the keyboard of the melodeon, straightened up. The worshippers relaxed a little and began to look about.

Then the captain adjusted his spectacles and opened a Bible, which he took from the table besides him. Clearing his throat, he announced that he would read from the Word, tenth chapter of Jeremiah:

" 'Thus saith the Lord. Learn not the way of the heathen, and be not dismayed at the signs of heaven; for the heathen are dismayed at them.

" 'For the customs of the people are vain: for one cutteth a tree out of the forest, the work of the hands of the workmen, with the ax.' "

He read in a measured singsong, stopping occasionally to hold the book in a better light and peering at the fine print thru his spectacles. And as he read, there was a sudden rustle on one of the back benches. A child had turned, stared, and pulled at its mother's sleeve. The rustle grew and spread.

Captain Eben drawled on to the twentieth verse:

" 'My tabernacle is spoiled and all my cords are broken: my children are gone forth from me, and they are not: there is none to stretch forth my tent any more, and to set up my curtains!

" 'For the pastors are become brutish and have not sought the Lord: therefore they shall not prosper, and ———' "

"A-men!"

The shout came from the second bench from the front, where Ezekiel Bassett, clam digger and fervent religionist, was always to be found on meeting nights. Ezekiel was the father of Susannah B. Bassett, "Sukey B." for short, who played the melodeon. He had been, by successive seizures, a Seventh Day Baptist, a Second Adventist, a Millerite, a Regular, and was now the most energetic of Come-Outers. Later he was to become a Spiritualist and preside at table-tipping seances.

Ezekiel's amen was so sudden and emphatic that it startled the reader into looking up. Instead of the faces of his congregation, he found himself treated to a view of their back hair. Nearly every head was turned toward the rear corner of the room, there was a buzz of whispering and, in front, many men and women were standing up to look. Captain Eben was scandalized.

"Well!" he exclaimed. "Is this a prayer meetin' or—or—what? Brethren and sisters, I must say——"

Ezekiel Bassett stepped forward and whispered in his ear. The captain's expression of righteous indignation changed to one of blank astonishment. He, too, gazed at the dark corner. Then his lips tightened and he rapped smarthly on the table.

"Brethren and sisters," he thundered, in the voice which, of old, had enforced obedience aboard his coasting schooner, "remember this is the house of the Lord. Be reverent!"

He waited until every eye had swung about to meet his. Then he regarded his abashed but excited hearers with a steady and prolonged stare.

"My friends," he said, "let us bow in prayer."

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John Ellery could have repeated that prayer, almost word for word, years after that night. The captain prayed for the few here gathered together: Let them be steadfast. Let them be constant in the way. The path they were treading might be narrow and beset with thorns, but it was the path leading to glory.

"Scoffers may sneer," he declared, his voice rising; "they may make a mock of us, they may even come into Thy presence to laugh at us, but theirs is the laugh that turns to groanin'. O Lord, strengthen us tonight to speak what's in our hearts, without fear." ("A-men!") "To prophesy in Thy name! To bid the mockers and them that dare—dare to profane this sanctuary be careful. Hired singers and trumpets and vain shows we have not" ("Thank the Lord! Amen!"), "but the true faith and the joy of it we do have." ("Hallelujah! Hallelujah! Glory!")

And so on, his remarks becoming more personal and ever pointing like a compass needle to the occupant of that seat in the corner. The minister's determination to attend a Come-Outer meeting, tho it had reached the sticking point only a half hour before, was the result of considerable deliberation. He had argued with himself and had made up his mind to find out for himself just what these people did. He was finding out, certainly. His motives were good and he had come with no desire to scoff, but, for the life of him, he could not help feeling like a criminal. Incidentally, it provoked him to feel that way.

"O Lord," prayed Captain Hammond, the perspiration in beads on his forehead, "Thou hast said that the pastors become brutish and have not sought Thee and that they shan't prosper . Help us tonight to labor with this one that he may see his error and repent in sackcloth and ashes."

They sang once more, a hymn that prophesied woe to the unbeliever. Then Ezekiel Bassett rose to "testify." The testimony was mainly to the effect that he was happy because he had fled to the ark of safety while there was yet time.

"I found out," he shouted, "that fancy music and—ah—and—ah—sot sermons and fine duds and suchlike wa'n't goin' to do me no good. I needed somethin' else. I needed good times in my religion" ("Hallelujah!") "and I've found 'em right here. Yes, sir! right here. And I say this out loud," turning to glare at the intruder, "and I don't care who comes to poke fun at me for sayin' it." ("Amen!")

A sharp-nosed female followed Mr. Bassett. She spoke with evident feeling and in a voice that trembled and shook when her emotion carried it aloft. She'd had enough of high-toned religion. Yes, and of them that upheld it. When her brother Simeon was took bad with phthisic, "wheezin' like a busted bellerses" and 'twas "up and down, trot, trot, trot," to fetch and carry for him day in and night out, did the folks from the Reg'lar Church help her? She guessed not. The only one that came nigh her was a Laviny Pepper, and she came only to gas and gabble and find out things that wa'n't none of her business. What help she got was from a Come-Outer, from Eben Hammond, bless his good soul! ("Amen!") That phthisic settled her for Reg'larism. Yes, and for them that preached it, too. So there!

Captain Eben called for more testimony. But the testifiers were, to use the old minstrel joke, backward in coming forward that evening. At an ordinary meeting, by this time, the shouts and enthusiasm would have been at their height and half a dozen Come-Outers on their feet at once, relating their experiences and proclaiming their happiness. But tonight there was a damper; the presence of the leader of the opposition cast a shadow over the gathering. Only the bravest attempted speech. The others sat silent, showing their resentment and conempt by frowning glances over their shoulders and portentous nods one to the other.

"Come, brethren," commanded the captain sharply; "we are waitin' to hear you. Are you afraid? If your faith is real, nothin' nor nobody should keep you from cryin' it out loud. Now, if ever, is the accepted time. Speak up for the spirit that's in you."

An elderly man, grave and quiet, arose and said a few words, dignified and solemn words of prayer and thankfulness for the comfort this little society of true believers had been to him. Ellery realized that here was another sort of Come-Outer, one of the Hammond type. Evidently, they were not all like Ezekiel and the shrill-voiced woman.

Then, from the settee in front of him, rose the lengthy and fishy person with the cowhide boots and enormous hands. His name was Josiah Badger and he was, according to Trumet's estimate, "a little mite lackin' in his top riggin'." He stuttered, and this infirmity became more and more apparent as he grew eloquent.

Tee-hees from the children and chuckles from some of the older members interfered with Mr. Badger's fervent but jerky discourse. Captain Eben struck the table smartly.

"Silence!' he thundered. "Silence! Brother Badger, I beg your pardon for 'em. Go on!"

But Josiah's train of thought had evidently been derailed by the interruption.

"I—I—I cal'late that's about all," he stammereded and sat down.

The captain looked over the meeting.

"I'm ashamed," he said, "ashamed of the behavior of some of us in the Lord's house. This has been a failure, this service of ours. We have kept still when we should have justified our faith, and allowed the presence of a stranger to interfere with our duty to the Almighty. And I will say," he added, his voice rising and trembling with indignation, "to him who came here uninvited and broke up this meetin', that it would be well for him to remember the words of Scriptur', 'Woe unto ye, false prophets and workers of iniquity.' Let him remember what the Divine wisdom put into my head to read tonight: 'The pastors have become brutish and have not sought the Lord; therefore they shall not prosper.' "

"Amen" "Amen!" "Amen!" "So be it!" The cries came from all parts of the little room. They ceased abruptly, for John Ellery was on his feet.

"Captain Hammond," he said, "I realize that I have no right to speak in this building, but I must say one word. My coming here to-night may have been a mistake; I'm inclined to think it was. But I came not, as you seem to infer, to sneer or to scoff; certainly I had no wish to disturb your service. I came because I had heard repeatedly, since my arrival in this town, of this society and its meetings.

(Continued Next Week.)

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Veterinary

Conducted by W. C. Fair, V. S.

Advice thru this department is free to our subscribers. Each communication should state history and symptoms of the case in full; also the name and address of writer. Initials only will be published. We cannot make reply by mail. This is one of the most valuable columns of the paper and we invite readers to make use of it. Clippings from this column, when properly preserved and classified, make one of the most valuable medical symposiums a farmer-stockman can obtain.

Ugly Wound on Leg.—About 2 weeks ago my horse got cut on the outside of the fore foot with a scythe. The wound extends from below ankle joint downward and forward some 6 inches, it also runs towards the heel. Called veterinarian who bandaged it up, without tying the 5 open blood vessels, 2 large and 3 small. He applied something to stop bleeding and bandaged the leg and foot. When he let horse up, blood started, so he corded leg, finished the work at midnight. He came next morning about noon, cut the cords, in 15 minutes the blood started again, he corded leg again and said he would leave the strings on until day after tomorrow. I did not dare leave the cords on so long, called another vet, who came, tied the 3 small arteries, but horse bled until he went blind, and tumbled down, then he bandaged foot, also corded the leg above the knee. He also gave him stimulants, hypodermically, left medicine to be given every 4 hours and fed him eggs and milk. Later I slackened cord, wound failed to bleed. He soon developed purpura, I called same vet, who stitched wound, applied dry corn starch under cotton. Later vet, gave me iodine, oil of tar and glycerine to apply. Hide has torn off and stitching gave way, vet removed proud-flesh and is expected to treat the eyes in a few days. I saw your formula for wire cuts in Pennsylvania Farmer and am now treating it myself. The horse eats good, walks fine, is not lame, wound discharges light colored pus. I am giving one dram doses of bromide of potash 3 times a day. The flesh on outisde of wound acts as if it would slough off. Under the fetlock there are some cracks, which I paint with tincture of iodine. W. H., Nineveh, N. Y. All things considered you seem to be managing the case very well. It is important that you keep the foot clean, dust on one part iodoform and 9 parts boric acid daily, also apply the oxide of zinc and boric acid powder once daily. If the wound fills with fungus tissue, dissolve one ounce permanganate of potash in one half pint of water and brush it on fungus two or three times a day. Feed him well.

Indigesion.—I have a cow that is in good order and eats seemingly as well as ever, but for a few days has not given over 4 quarts of milk to a mess, when previously she gave 14 quarts. We can't understand this sudden shrinkage in her milk yield, without her showing some symptoms of sickness. T. J. O. Had you given her one pound of epson salts soon as you noticed the shrinkage in milk flow she would have soon improved. Give her ounce bicarbonate of soda and two ounces of powdered wood charcoal in feed 2 or 3 times a day.

Rheumatism.—I have a sow which will weigh about 200 pounds that has for the past two days refused food, she has rather poor use of her hind quarters. She prefers to lay on the cool ground. C. L. H., Erma, N. Y. Give her 3 ounces of castor oil, which will purge her. Follow this with a teaspoonful of fluid extract of gentian 3 times a day. Change her feed, hand rub her back three times a day.

Tumor Abscess.—I had my hogs inoculated with the double treatment for hog cholera, about 5 weeks ago, now several of them have hard bunches where they were injected. These knots are hard and appear to be stationary, but are not painful when pressed. How can such bunches be removed? W. A. G., Frankford, Dela.—Apply tincture of iodine once daily, if this fails to reduce them, then have bunches cut out. Had there been greater pains taken to do the work surgically fewer of you pigs would have developed abscess, followed by the formation of tumor. If now left alone until the pigs are marketed the bunches will perhaps not have changed much.

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Installing a Farm Water System—I

This Article Discusses Ways of Securing a Supply of Water

By WILLIAM C. TUCKER

SANITARY ENGINEER

Because of the interest our farm readers have in the installation of a water system in the home and the barn, we are fortunate in securing from an experienced engineer in this line a series of three articles. The first one describes different ways of securing a supply of water, the second will discuss the installation of a system in the home and the third will treat of the disposal of the sewage.—Editors.

A comprehensive water supply system for the farm must be designed with great care and forethought; all possible developments and increments must be well considered, so that there may be no replacements, after they are to be incorporated. The fundamentals of the system must be well proportioned, and of correct size, niggardly or skimp designing may seem to be demanded by size of purse, but it will be found better judgment and less expensve in the end to install the essentials of proper capacity so that all demands may be properly met. A slight increase in cost of the original installation will be found to be well repaid.

The problem of providing an economical, adequate, and reliable water system for farmers' use, always demands a certain amount of data, which can only be obtained after a most thoro exploration of the property and a careful study of conditions and requirements. The antiquated method of obtaining water from the nearby well, with its rope and buckets, or even from the pump at the kitchen sink, should be done away with so that this great source of drudgery upon the health and vitality of the workers may not be necessary.

The dependable quantity and quality of the proposed source of the water system must be definitely known, there can be no guess work, the flow must be carefully gauged, and if possible during the dry season, a chemical analysis should be made, particularly should buildings be adjacent. The histology must be most carefully investigated and every safeguard must be considered, both for the health of the household and the animals.

Source of Water Supply

The water system for the farm may be derived from either of two principal sources; springs or brooks, and artesian or driven wells. The water of the former is soft and is more desirable for drinking and general household purposes, while that of the latter may be hard and not so generally relished, or not so satisfactory for use in the laundry.

The ideal source for the water system is of course the spring, which must be thoroly explored. The earth around must be cleared away for a considerable distance, and the main spring and all its tributaries, surrounded by a tight masonry wall to prevent seepage from the outside, and with curb extending well above the surface of the surrounding ground. From the spring there must be led an overflow pipe of ample size, preferably of earthenware, with tight joints to a basin or reservoir, which shall act as the reserve supply.

The use of a brook extending thru the farm, with a foreign origin, as the main water supply for the property, is not to be accepted without apprehension and mistrust. That portion of the brook which lies within the farm is of course under control, but that beyond is not, and there is always fear of contamination.

The artesian well is another source of supply for the general water systom and is to be employed under certain definite conditions. There is always an uncertainty of its cost and of the quantity and quality of water which it will yield. Where the quantity of water demanded is large, and no other means of supply are available, and the purse string is loose, the deep or artesian well will be found to meet all demands.

Reserve Supply

A basin or reservoir of ample size will be found necessary to act as a reserve supply for the water system, into which may be collected and retained the gravity discharge from the spring upon the property. The basin must be of ample capacity, to provide against shortage during the dry season. It must be well constructed with watertight walls to prevent seepage in or out, and which shall extend well above ground with curb. At one end there must be built a grit chamber with screen, to intercept any foreign substance, and into which the overflows from all springs must be carried.

The reservoir and springs must be housed in a secure manner to provide against contamination, mischief and misuse. The housing must be provided with window and door and with ventilation. Figure 1 shows a reservoir and grit chamber receiving overflow from spring.

The springs upon the farm which may be available for the water system are often found at an elevation considerably above the house and farm building. It is poor designing and lacking of good judgment to supply by gravity directly to points of consumption from the springs; a reserve supply at the springs should be maintained, so that any excessive demand may be immediately met. It is not expedient to place tanks in the different buildings to act as the reserve. They are expensive, their weight and that of their contents makes special framing necessary, they have to be protected against freezing, and must be provided with special overflow connection to prevent injury to ceilings below.

A Country Home With City Conveniences Beats a City Home

Elevated Tank

Upon many farms the source of the water system will often be found at a location below that of the building, an elevated tank will then be necessary. The reserve supply at the spring must be maintained under all conditions. The elevated tank is simple in construction, is generally of wood, well built, and must be provided with conical, frost-proof cover, and scuttle, for inspection. It should be of a capacity to hold at least one day's supply. No tank should be smaller than 1,000 gallons—stave 5 feet, diameter 6 feet, and costing about $90. The superstructure for the tank must be strong, well built, and carefully bracked. It may be of wood, pipe or structural steel for heavy weights. The supply and discharge pipes for the tank must enter at the bottom with suitable lock nuts and lead washers, it must be provided with overflow so that in freezing weather ice may not form on the sides. The supply and discharge to and from tank must be frost-proofed in a most thoro manner. The use of the supply pipe to the tank as the discharge pipe is not to be considered; the cost of a separate discharge will not add greatly to the original outlay and will obviate all sources of annoyance from vibrations and water hammer. The necessary height of the elevated tank above the ground can only be determined by the friction head to be overcome in the discharge pipe, governed by its diameter, desired rate of discharge and length, which data must be accurately known. Figure 4 shows the tank elevated upon suitable structure with conical cover and supply and discharge pipes.

Pumping Equipment

There are many methods which may be employed for raising water from its source to the desired point of discharge, all of which have their merits, are of various types, adapted to the

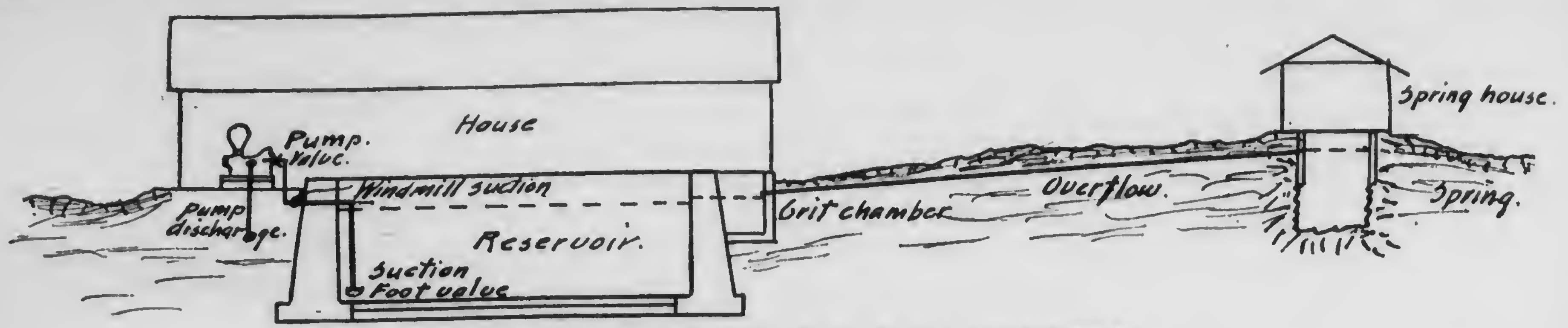

Fig. 1.—Spring and Reservoir; Pump, Suction and Discharge.

special duty to be performed, and accomplish the desired results with economy and efficiency. All pumping equipment must be placed as near its suction basin as possible to reduce friction in pipe, and must be carefully housed and protected. The end of suction must be provided with foot valve, and the discharge pipe with a check valve to relieve pump. The vertical distance between pump and bottom of source of supply must not be over 20 feet. The less suction-lift is required; the greater the efficiency in pumping, and lower the cost. Suction and discharge pipes to and from pump must be of correct size for duty to be performed, to lessen friction and to produce economy.

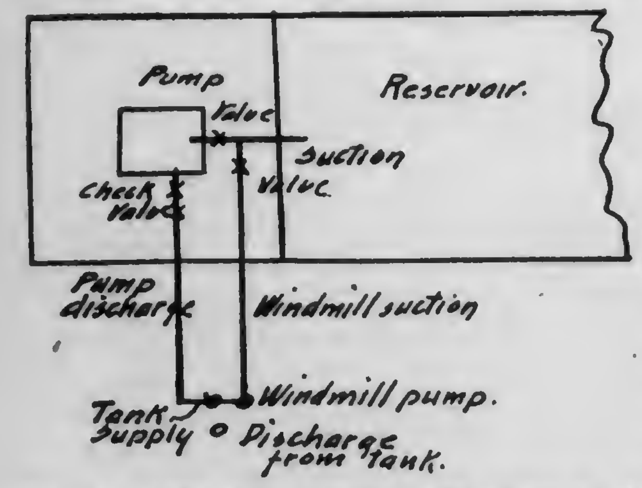

Fig. 2.—Pump and Power Cross-Connected so That Either May Be Used

The oldest, simplest and most economical method of pumping of modern times, is by means of the windmill, but its source of motive power is unreliable in most places, and varies greatly in intensity, and can only be put to general use in localities where there is a constant and dependable air current. A large reserve reservoir in connection with windmill pumping is absolutely a necessity and must be provided. The pumping mechanism is most simple and rudimentary and consists of a working barrel or cylinder with check-valve on suction and discharge pipes, and thru which operates a piston rod with piston at lower end, into which are built a set of valves which open on the downward stroke, and close on the upward, the vertical movement of the piston rod is produced by means of connecting rods from the crank of the windmill.

Another method of pumping, most common, with which we are acquainted since our boyhood days and which has given long and faithful service, is by means of the hot air engine and pump mounted together on a common base. This type of equipment derives its power from air heated by coal or gas, is most simple in construction and operation, but its efficiency is within narrow limits and its cost of operation rather high.

The gas engine as a means of motor power for pumping is economical, is efficient and has a wide range of activity. Should the farm be large, a small, central power plant will be found most necessary for pumping, electric lighting, feed cutting, sawing and many other uses, for which the gas engine may furnish the motor power. The pumps for this installation should be of the triplex power pattern which are manufactured for high or low service, of various sizes and capacities and most economical of operation and efficient in result. These pumps may be driven by gear or belting, the former being more positive but much more noisy. With a farm of modest dimensions a central power plant is not considered, in which case the gas engine is belted directly to the pump. In Figure 2 is shown a pumping outfit arranged with either gas engine or windmill which is most simple and requires but little thought. In Figure 3 is shown method of connecting discharge from pump of windmill into that from gas engine to tank.

The use of electricity as motive power for pumping has many advantages, but it will not be found economical except when used in large quantities, the speed of the motor is high and will require reducing pulleys, with current cheap and constant it is ideal for pumping.

The pumping equipment for artesian or deep well work is similar to that of the windmill with the difference that the working barrel has, of necessity to be so placed that it is always submerged and has ample supply to draw upon. The motive power may be either the windmill or gas engine.

The use of the centrifugal pump for small or general use will not be found satisfactory, and its consideration need not be entertained.

The pressure system of pumping has sprung into prominence of late. It can be operated by a small motor or gas engine, or it can be connected to the dairy house or other power that is used daily.

It requires considerable attention, and has a limited reserve supply. It is most compact and simple in operation and can be placed in the cellar or any other location available, but it must be always readily accessible. In construction it consists of a retaining cylinder of steel which must be of ample size, but which is usually limited to the space available, and which is kept filled and under pressure. In some cases this is done by means of an electrically operated pump, which latter is provided with automatic starting and stopping device governed by pressure in tank. To maintain the desired pressure a small amount of air is forced into tank with the water. A thing to be guarded against is the possibility of the tank being filled with water, but lacking in air pressure, thru some disarrangement of the air inlet valve, in which case, of course, there would be no force. With the gravity flow, reservoir or elevated tank, every drop of water it contains is available.

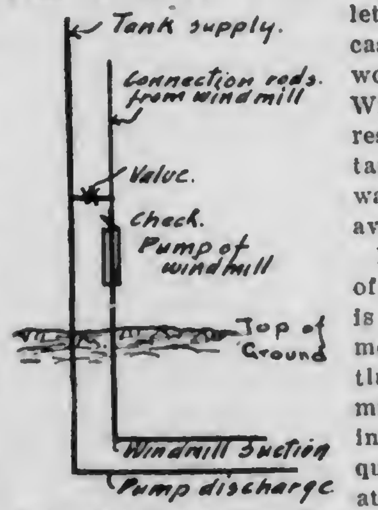

Fig. 3.—Connection Between Pump and Windmill or Other Power.

Lifting water by use of the hydraulic ram is probably the oldest method of modern times except the windmill. It is elementary in construction, requires practically no attention, but should be housed for protection against weather and injury. It is most extravagant in operation and can only be employed where large quantities of water may be available. Its construction consists of an impitus valve with air chamber which is connected by pipe with the source of supply. In operation the water passes thru this valve which closes suddenly, forcing a small portion of the water to the desired height. Under ordinary circumstances about one-tenth of water passing thru valve is raised to a height ten times that of the fall to the pump.

The size of the pump suction and discharge must depend of course upon rate of delivery desired. It is poor judgment to figure too closely. This can be well illustrated in the example of a one-inch and one and one-quarter inch pipe, the area of the latter is 73 percent greater than that of the former, while the cost is only 36 percent greater. No supply to the house should be less than one inch in diameter.

PREPARING FOR THE AUCTION

Farm tools at auction sales are frequently sold under their real value because no effort has been made to place them in presentable condition. Of course it is not fair to sell junk at an auction and try to make it better than it is. But there are many fine tools sold which have only had one or two years of service on the farm and they can be cleaned and oiled or even brightened with clean paint. It will bring more bids than can be obtained on a good machine that is caked with dust and dirt in such a fashion that the buyer cannot scratch deep enough to find out the true character of the goods on which he is going to bid. Of course he plays safe and does not bid much money on tools of uncertain value.

Livestock bring the best prices if they are cleaned up before the sale and displayed in clean stalls or pens. Attend one of the auction of an up-to-date livestock association and note the care with which the animals are groomed before the sale. Then note the effect on bidders when clean, sleek stock comes into the ring. Most farmers have attended live stock sales where the cows have been given even poorer care than usual just because the owner was in a hurry to get rid of them. Of course the owner pays a huge price for such carelessness.

Before a sale of live stock the owner should look up the ages of the stock in the sale and the breeding dates. It pays to have this information handy in a note book so that all necessary information can be given to prospective buyers before the sale and during the bidding.

Frequently certain buyers will not bid on an animal if the owner cannot give necessary information concerning its age and breeding. If the animals are registered it pays to have the registration papers at hand for the examination of buyers. Have the pedigrees ready for instant inspection. Have the papers ready for delivery at the close of the sale. It is poor business to say that an animal is eligible to registry but not registered and that you had the pedigree but you have lost it. The statement may be entirely true and yet it will prejudice many buyers against the animal and influence the size of the bids.

More money can be obtained for poultry at an auction if the birds are graded into old hens, pullets, cockerels for broilers and old cock birds. A buyer who is interested in one lot of poultry may care nothing for the rest. If the birds are lumped together some market buyer will probably bid them in at the lowest price while a grading of the stock may bring several dollars more. Sometimes at an auction the poultry are allowed to range and the owner simply tells how many birds he owns and the bids are taken as so much per hen. This keeps many buyers from purchasing the stock as breeders.—R. G. Kirby.

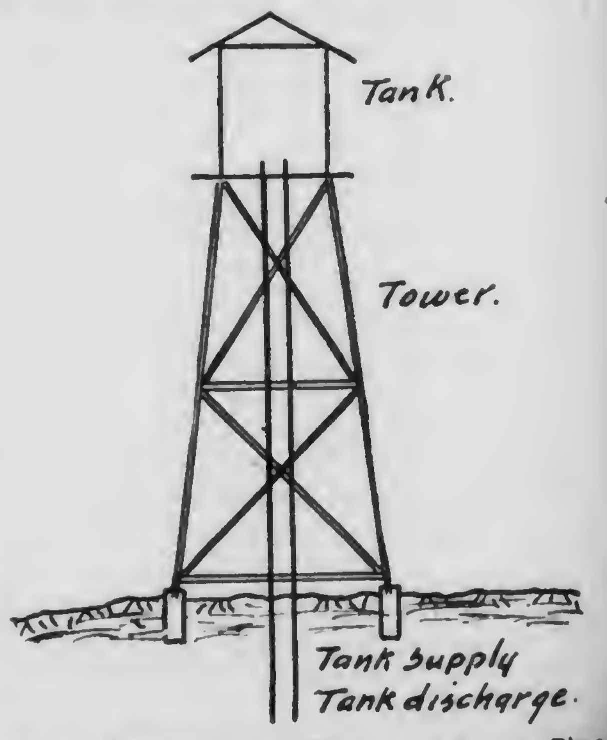

Fig. 4.—Elevated Tank Tower and Supply Pipes

The Season's Lessons

C. C. HULSART, New Jersey.

The season now about closing brings very vividly to one's mind the old, but very true, saying, "that if our foresight were as good as our hind sight, we would know more a blamed sight.

How easy it is to look back and see, with clear vision, what we could not see at all when looking ahead, or into the future. Not being able to penetrate the future, is what makes our business-farming somewhat of a game of chance. There is not, neither can there be, any hard or fast rules governing agriculture.

The scientist may tell us that a given crop of corn takes from the soil so many pounds of nitrogen, phosphoric acid and potash. That a crop of potatoes does the same, but in different amounts of the three principal elements of plant food; and that a crop of clover gathers nitrogen from the air and leaves a goodly portion in the soil to feed succeeding crops. The scientist will also tell us that nitrogen is the element of plant food that promotes leaf and stem growth; that soluble phosphoric acid is needed by all crops, particularly those that ripen quantities of seed, and that it is essential for the early maturity and ripening of the crop.

All these teachings are quite true under normal or laboratory conditions, but when we run up against abnormal conditions of weather, as has been the case this season now closing it knocks all scientific conclusions sidewise and chaos reigns supreme. I do not mean by the above statement that I am taking issue with any of our scientific brethren; far from it. If I have any quarrel it is with the weather or Mr. Rainmaker, whoever he may be.

The writer started his season with as much vim as most any man past three score years could muster. I had confidence in the world, in conditions, and in myself. To look into the future as far as it was possible to look, it appeared to be a safe gamble to cut loose and sail the ship for all she was worth. The help question too was more easy; better men could be had for a slightly less wage than a year ago. As the volume of crop for the previous two or three years has been governed by the amount of available help to produce it, it was encouraging to feel that help could be had even at high wages. Fertilizers were also high, but we paid the price, bought more than our usual supply because we were going at our summer's work fortified for results, knowing full well that an abundance of good available plant food was essential for maximum crops.

Everything went smoothly for a time; crops were planted a little earlier by date than usual. Sweet corn, for table use, is my first crop. The crop was planted about April 19th and came up splendidly; hardly a hill missing in a field of five acres. Early tomatoes were set in the field about the usual time, from May 7 to 12. Field corn was planted a little earlier than usual; it came up very good and grew rapidly; peppers were set at usual time and started off well. Cantaloupes were as good as other crops mentioned; needing but very little replanting.

Among the permanent crops we have apples, no fruit of any consequence this season. Grapes set a wonderful crop, but when the excessive wet weather came rot developed and destroyed probably 40 percent of the crop, however, we harvested 5 tons on two acres and sold them as cut for $90 per ton. Asparagus was about normal, but sold slightly higher than it did the year previous. This sound good so far, does it not? I think so, and did think the same when all crops were as described; but I am not up to July yet.

In June it began to get a little dry and as the month wore on without any rain one would hear on either hand "we need rain." Soon one came that was hailed with delight and it did a lot of good too. On July 5th there came a thunder shower with a down pour of rain with hail; that was when the farmers' trouble began who were trying to grow crops like myself. This was followed by repeated showers and cloudy threatening weather for two weeks, without any sunshine. What was the result? My sweet corn was ready to pollinate, but could not because the pollin was never dry. Cantaloupes were about ready to set their main crop. It was so wet, bees could not work among the bloom; hence they did not set till after the worst was over, and then set all at once.

This wet spell lasted two weeks with scarcely any sunshine and wet weather continued until about September 1st. The down pour on July 5th accompanied by hail practically ruined my early tomato field causing the vines to die prematurely. This might not have occurred had that been the only shower, but from that time (July 5) on we had heavy rains every few days. It became so bad later in the season that pepper roots rotted off right in the wet ground; hence a very light pepper crop. The potato farmers have had their trouble too; potatoes have rotted badly in some places. One farmer tells me the rot was worse where planted late.

The rot is not so bad with the Giants as it is in round stock. Many grain fields were caught out, cut and shocked but ruined before they could be dried.

The symptom that farm labor was more plentiful and cheaper early in the spring soon faded away. During late summer and early fall it was impossible to hire help for prices farmers could afford to pay. In my own operations the fertilizer problem entered largely into a minimum yield as well as the very wet weather. That part of it will be discussed in a separate article later. All told, the season has wound up disappointing. Had my foresight been as good as is my hindsight, I would have managed differently.

Loading Milk at Roadside Station of Cooperative Truck Route

Renting Farm on Shares

I have read with interest Mr. Glover's discussion of the renting question. May I ask if where the owner and tenant each own about one half of the stock, tools and equipment, and they divide everything half and half that is taken in from the sale of what is produced on the farm, less expenses, who pays the taxes, insurance and labor charges? I think the plan a good one, but suppose the tenant is a young man just starting out and unable to buy his half of the stock, tools and equipment how would Mr. Glover suggest putting the business on a fair working basis? What is the general plan of renting on "thirds?"—W. R.

Mr. Glover answers as follows:

1.—The owner finds the farm and the tenant does or pays all the labor on the farm, except that of threshing, silo filling, hay baling and corn shelling; each would pay half for machine work, outside of regular labor.

2.—The owner pays all the insurance on farm buildings, but each pays half the insurance on live stock, grain and implements.

3.—Each stands half the repairs on implements, and each pays half the fertilizer used, but the owner or landlord pays for all the lime bought for the farm, as it is supposed to be more lasting in its effects.

4.—Many young men would begin farming, if they had the money, and it costs less to buy and pay for half the stock and implements than for the whole outfit, so this method will enable men to begin farming with less capital or not require them to go into debt so much.

5.—When an owner of a farm has it stocked and wishes to quit farming, he can sell half his stock and implements to a worthy young man, whom he thinks could operate his farm, and sell half his outfit and take his personal note with interest to pay for his half as soon as he is able.

6.—If the owner wishes to try this plan he can form a partnership with a man whom he can trust and buy all the outfit needed, taking the tenant's note for his half, and handle the income himself monthly, paying the expenses, then he can divide any surplus with his tenant, and retain a little each month, so as to get his money back by degrees and be on the safe side by handling the income himself as the senior person in the partnership, as this is a partnership just as a store business is.

Renting for the "Thirds," means that the owner furnishes the land, stock and implements, and the tenant does the work or farming for ⅓ the income of grain and stock, but this plan has not worked out to the satisfaction of both parties after the first year, as the tenant will soon have stock enough in a few years, if he raises stock, to begin for himself, and go for himself, or get discouraged and quit, as most of them do here. But, by the half plan all thru the question of seed, feed and income, everything is half when anything is bought or sold and is less trouble.

It pays in trouble saved to have details mentioned in writing when renting a farm, so as to avoid misunderstandings—J. N. Glover, Union Co., Pa.

SEED SELECTION

Every year we farmers are doing the very best we can to get the top notch seed corn for the coming crop. We save seed from stalks that just suit us and then select the best ears from the corn that grew correctly on the stalk. It seems like a lot of bother for nothing to some of our older farmers but we know that it pays and pays big for the time we put in at the job.

But sometimes during the last year I have been wondering why we don't try to do something about some of our other crops as well as the corn. Our oats, for instance, might be a good place to stop. I do not know the variety of oats that I am growing. That sounds rather queer but I'll venture to say that many farmers do not know the variety of oats they grow. How about it?

My oats average pretty well with those of the country around me, tho I don't get the highest yields with a soil not particularly adapted to this crop. I clean the seed and treat it every spring; but the seed is mixed. It has occurred to me that the heads of some of the best oats I have could easily be saved and in 2 or 3 years I might have a variety that would beat what I now have by 10 bushels to the acre or even more. It is not impossible at all.

Wheat has come in for a little better showing tho some of us do not pay much attention to the variety. Barley is another crop and so on down the line. Once in a while a city dweller tells us that we are a slow bunch and after the spontaneous indignation dies down I have to agree with him. Don't you ever feel that way?

Not many miles from here are two farms owned by brothers. They devote their time to truck and fruit farming. I know these men and they have told me their experience with tomatoes as a crop for the canning factory. They have repeatedly taken off crops of 20 tons to the acre and we wondered why they could do so much better than the average farmers. Here is the secret, they do not buy their plants of the company that takes the tomatoes, but raise their own. The earliest tomatoes and the finest ones are saved each year for seed; by doing this for a few years they have a strain of tomatoes that is far better than the average.

We are not taking care of all the opportunities that we have with us to produce better crops. Just now, it is discouraging to go ahead much, with agitation trying to force our prices down but we must remember that the more we produce to the acre of any crop the lower the cost per bushel or pound of that crop and it will help to bring a fair profit in spite of a lower than fair price.—Earl Rogers, Ohio.

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Putting Cooperation Into Practice

By CHARLES H. DARLINGTON, CHESTER CO., PA.

At a local grange meeting the purchasing agent said, among other remarks: "It is not easy to get up club orders or to get concessions in prices, but it can be done. The purchase must be for cash, but the farmer seldom puts up the cash until he gets delivery—sometimes not then. I have done the work for nothing. have sometimes had as much as $150 of my own money invested, and had to wait at times for months to get the last of it out again. I do not think co-operative buying will work out in practice. What we ought to give our efforts to is co-operative selling."

But co-operative selling has its difficulties also, despite all that has been recorded of its success. Can you get a neighborhood of farmers to club together and ship a car load of young cattle or hogs to a central market? Not more than once. The buyers look over the lot on its arrival, notice a cull animal or two in it, and shave the offering accordingly. The shippers are not pleased, and when they learn the facts—if they ever do—they decide firmly not to enter a combine of that sort again with Jones until he raises and ships as good stock as they do; and Jones constitutionally can't. They won't ship with him, they can't make up a carload without him; and co-operative selling drops out right there.

The joker that takes the farmer's best trumps away from him, either buying or selling, is Grading. Where co-operative selling has been a success it has been because of the fact that the grading part of the game was fair to him. Let us see how this works out:

Smith shakes down a few barrels of apples into the long grass in his orchard, and sells them to the town grocery at, say, fifty cents a bushel, little and big. The next time he is in town he may see in the grocery window his own apples—some of them sorted and polished and perhaps wrapped in tissue paper—at two for five cents. The storekeeper has graded those apples for his market, and he sells even the culls at a profit. The next time Smith tries his own hand at grading but he does not know the grocer's customers and the work is amateurish. So he gets little more; not enough to pay for the time he put in. The grocer isn't going to give away his joker to Smith, and so he tells him: "but these are shaken apples, and bruised. Bring me hand-picked ones." Smith tries hand-picking and home-grading, and gets sixty cents a bushel. That doesn't pay him, and he gives up and falls back on shaken apples, run of the orchard, and the fifty cents.

Robinson runs a dairy and hauls his milk to the creamery, which pays so much a pound with a stated premium for butterfat. The creamery weighs in his milk and conducts its own butterfat test, and the net result is that Robinson gets for his milk just what the creamery chooses to give him. It may be a just price and it may be not; he has no means of knowing. The terms read fair, but the grading is all in the buyer's hands.

One more example and the last: Dalrymple ships a train-load of wheat from his own bins direct to Chicago. It is put into elevator there, graded as it goes in, and receipts are given him for so many bushels of each grade. Fifty of his small farm neighbors, with not enough wheat each to fill a car, sell their crop to a local buyer in some adjacent town. This buyer grades each offering as it comes to him to suit his notion and ships another train load to the same Chicago elevators. (Don't imagine for a moment that any mistakes of judgment of the local buyer will favor the little farmer. When the buyer is also the grader he doesn't make that sort.) The grader at Chicago has no interest in the price and every lot that reaches him gets an equally square deal.

On this very point turns the success of the Pacific coast co-operative apple shippers. The growers bring their crop—run of the orchard—to the packing station where it is received by the agent of the association. This agent has each load sorted and packed by experts, giving the grower credit for exactly what he delivers of each grade. The packed result is sent to market in carloads, as the property of the Association, and whatever profits accrue are divided equitably among the members. The grader and packer works for who pays him—the Association—and the producers all look alike to him. But the profit of the Association is the profit of each member, and so the grower gets just what is coming to him, which is all the farming community has ever asked of the market.

Along these lines farmers must look for any real and permanent benefits from co-operation. They can not do their own grading and get the cost of time back. The market will not permit it, but always finds a reason why the grading will not do. It is useless to urge them to try it. They will always be at the mercy of the buyer when the buyer does the grading, however fair the proposition may look or read in general terms. The buyer will never in fact accept the seller's grading.

The answer then, lies in finding workable methods in as many lines of farm production as possible for securing independent graders, umpires, who have no interest in the sale, who draw their pay from some outside source or equally from both buyer and seller. The coal operators weigh each carload as it comes from the mines. But the miners have demanded and secured the right to maintain a check-weigher in their own interest at the company weigher's elbow, to see that they get justice. The farmer who kills and dresses a couple of hogs with pork at 10 cents per pound may find when he gets to town that the buyer demands the plucks free, docks the seller a certain number of pounds "shrinkage" and insists on paying by the figures on his own scale beam. What the farmer needs there is an independent party who will pass expert judgment on that pair of hogs, and label each with its net cash price at current market rates, for any buyer to close with at sight.

Milk producers could profitably form a local association and insist on an umpire milk appraiser, paying half his salary, whose work would be subject to inspection and criticism by either buyer or seller at any time.

There will be found many practical objections in trying to apply this idea, but there are none insuperable. The miners have found the answers. The western fruit growers have found the answers. The farmers are

just as capable, and they have the granges to thresh them out in. Many lines of farm production are too small and scattered to bear the cost of an umpire between them and the buyer, but when such a system is once established, and applied to even one line in a community its farmers will be on the high road to fair selling. And that line will either monopolize the industry of that neighborhood or it will point and pave the way to like co-operation in other lines.—Charles H. Darlington.

VALUABLE SUGGESTIONS

Storing Away Machines

The other day we were backing the binder into the rear of the carriage house, where it is kept over winter, when my friend Bill came along. The doorway was narrow, and the horses were a little nervous about backing the heavy machine, so that all hands were relieved when the job was finished without a smash up. Then Bill made a suggestion:

"Take a board off the back of the shed," he said, "and fix it so that it can be easily taken out and replaced. Then, the next time you want to run the binder in, take out the board pass a rope thru the hole and fasten it to the binder. Hook the team to the other end, and pull the machine in. It's much easier, and it works fine. We tried it up to our place."

Wrap a greased rag around the knotter bills, when thru harvesting, to prevent rusting.

Seeding the Shock Rows—Wheat After Corn

The oat crop is being cut out of the rotation in some sections, and wheat follows directly after corn. Usually the corn is carried off into shock rows, which are spaced as far apart as convenient. It is often impossible to get the corn husked in time to seed down these shock rows with wheat and grass. Last year we disked the old shock rows in the spring, and sowed them to oats, for a nurse crop, with timothy and clover. By this method, we got a good catch of grass where otherwise there would have been nothing. After the wheat was harvested, we cut the oats, and it was hardly possible to tell where the spring seeding had been made. If the oats are sown rather thinly, and cut for hay instead of being allowed to mature, the grass and clover may take better.

Saving the Dry Mash

Our hens apparently relish the beef scrap in their dry mash more than some of the other ingredients, because they will often pick out the little particles and spill the rest on the floor, where it is wasted in the litter. We tried several kinds of wire screens and gratings designed to prevent the mash from being thrown out, with no success. To prevent the mash from being wasted, I made a box to set under the hopper, about six inches wider than the bottom of the hopper, and covered it with a frame to which I tacked inch mesh poultry netting. The hens stand on the edge of this box to eat, and what they spill falls thru the wire into the box and is saved. The box should not be more than six or seven inches wider than the hopper, in order to prevent droppings from contaminating the spilled feed.

Incidentally, the hens that are most persistent in picking over the mash for the beef scrap lay the most eggs.

Work Shoes

It is surprising to note the effect that different kinds of work shoes can have on one's feelings by the end of the day. Heavy, clumsy shoes may weigh as much as five pounds to the pair, and will tire a man as much as a day's hard work, if the job involves much walking. In ordinary situations, a light pair will do much better. The "Scout Shoes," so-called, are light and easy on the feet, and yet are very tough and give long service. It is hard to find a better work shoe for general wear.

It pays to keep the work shoes well greased or oiled with harness dressing, which increases their life and helps to waterproof them. Shoes should be kept in good repair, especially in regard to run-over heels. Attention to these points seems a little thing, but foot comfort is worth a good many dollars. If a man's feet hurt or are tired, he feels it all over.—R. L. Scharring-Hausen.

PHOSPHATED MANURE

One of the most significant facts in dealing with soil fertility experiments at the Ohio Experiment Station, which now cover more than 25 years' work, is that acid phosphate added to stall manure is the most effective fertilizer known. While greater crops may be grown with large amounts of commercial fertilizers, the greatest economical returns and even yields come from phosphated manure. This new fertilizer is made by simply adding about 40 pounds of acid phosphate to a load of manure when it is removed from the stable or barn.

Even with corn at $1 a bushel, wheat at $2 and hay at $20 a ton, 1 ton of acid phosphate used to reinforce manure has returned more than $200 worth of crops at a 21-year average at the Ohio Experiment Station.

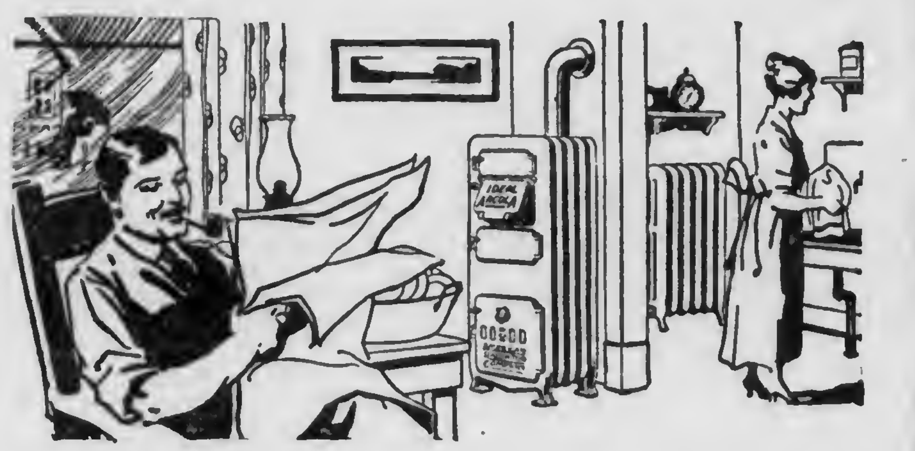
These fertility experiments show that the acid phosphate should be combined with stall manure to be most effective. The average yields for 21 years at the station with stall manure and acid phosphate are 66 bushels of corn, 28 bushels of wheat and 4,900 pounds of clover. On land that received no treatment the yields are 35 bushels of corn, 13 bushels of wheat and 2,800 pounds of clover.

Station officials point out that the use of phosphated manure for top-dressing wheat, or for land to be plowed down for corn next spring is particularly effective now on account of the demand for more food and more economical costs in crop production.

CUT STRAW FOR MANURE

While we would not advocate cutting straw for the farmer who is very busy and has no spare time, yet in many instances it may prove practical and undoubtedly very profitable to cut straw before being used for bedding. When straw is abundant it is used likewise. It may be made more serviceable by cutting into short lengths. The reason for this is because when loose straw is used it absorbs the liquid, of course, but it does not decompose as speedily as when it is cut. It becomes a better absorbent also. The manure will be more valuable because the loss of ammonia will be checked by the use of suitable absorbent material. We admit the extra labor incurred will hinder many farmers from practicing this, yet we cannot honestly dispute its value.—Warner E. Farver.

Winter is Coming!



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We want you to have a copy of "Ideal Heating." It tells you things you ought to know about heating your home. Puts you under no obligation to buy. Ask for booklet on "IDEAL-Arcola" if interested.

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Sold by all dealers. No exclusive agents

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Write to Department F-30 Chicago

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30x3 1-2	7.50	34x4 1-2	12.50
32x3 1-2	8.00	35x4 1-2	13.00
31x4	10.00	36x4 1-2	14.00
32x4	10.00	35x5	14.00
33x4	10.50	37x5	14.00

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Save enough for your own use and smoke your meat and fish in the National Giant Smoke House. This wonderful smoke house is portable. Can be operated in and outdoors. Runs on sawdust, cobs and little bark for seasoning. The

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We do not claim to pay the highest price in the world—but we do claim and absolutely guarantee to give you every dollar your pelts are worth—often more than you yourself expect

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PENNSYLVANIA FARMER
AGRICULTURE THE KEYSTONE OF NATIONAL PROSPERITY
ESTABLISHED 1880 · PUBLISHED WEEKLY

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PHILADELPHIA, PA., OCTOBER 25, 1919.
VOLUME 40 · NUMBER 17

Our job is to serve our readers. Whenever and wherever we can help you, write us.—The Editors.

An Educator Gone

A CABLEGRAM from Gibralter brought the sad news that Dr. Cyril G. Hopkins, chief of the Agronomy Department of Illinois College of Agriculture, had died. He went abroad a few months ago at the suggestion of this Government to assist in agricultural development of some of the Mediteranean countries. He was about 53 years old, and his death will be a severe loss to agricultural science. Few men have gained the prominence in experimental work as has Dr. Hopkins and his removal from the Middle West will sadly be felt.

Watch the Dog Law

READING between the lines in the report of the convention of the Pennsylvania Association of County Commissioners one detects a sentiment in that organization that is opposed to the present dog law of this state. This opposition is based upon an alleged inefficiency of the law because of the difficulty of enforcing it. Careful observation will show that the law is not enforced in a great many places, but that is not the fault of the law. It is due to the laxness of spineless officials who have a keener interest in retaining their position than in the enforcement of law. It is altogether possible that the present law might be improved, but whenever the question is opened up it is a mighty hard job to put thru any really protective legislation, because of the many opposing interests. We had better hold on to what we have, rather than run the risk of losing all by tinkering with it.

Thinking Time and Reading Time

WHEN the wonderful autumn days begin to shorten, the farmer has more time for the quiet strengthening of his faith and love for the farm. It is because he has time to think, to commune with nature, which he of all men best knows and understands, that the farmer loves the autumn season. Mother Nature's book is before him; if he can interpret her lessons he will be better able to work in harmony with her the coming season. Autumn time is thinking time on the farm.

Following these shortening autumn days comes the lengthening winter evenings when the farmer has more time for reading. No other class of men have greater opportunity for reading than the farmer. In his well-lighted home—for practically all rural homes can now be well-lighted—the farmer has more time for reading than the city man. This accounts for the fact that so many of our well-read, clear-thinking people are farmers. Who can say how much good will come from reading good books and periodicals during the long winter evenings. Surely, the farmer can not afford to allow them to pass without providing his home with an abundance of wholesome and reliable reading. Winter time is reading time on the farm.

More Work; Less Talk

THOMAS CARLISLE, in a general appeal to humanity, once cried:

"Produce! Produce! In God's name, Produce!"

It is doubtful if those in the time it was uttered needed the exhortation one half as much as it is needed just now. With half the world torn up and millions clammoring for the necessities of life and other millions anxious to buy luxuries as well as necessities, it is a burlesque upon human intelligence that we should have in this country alone 2,000 strikes now in progress. Mills, mines, factories are crippled in many places because of strikes; but in spite of this, farms are short of help and farmers are working double time but not for double pay. The air is full of talk. Everybody is willing and anxious to talk. Conventions, committees, investigators, orators and agitators galore seek a remedy in some new-fangled panacea when the only remedy is work. When Colonel House, the "Silent Man" arrived from the Europe the other day the reporters sought an interview, but he replied: "Everything on every subject that can be said, has been said." Would that everybody thought the same and would go to work in the good old way, and in the old time spirit!

Americanism: What Is It?

JUST now there is special emphasis being laid upon the necessity of instituting a campaign of Americanization. The immediate object of this concern is the foreign born resident among us. The immediate purpose is to off-set the revolutionary teachings of "Bolshevic" and "Red Terrorist" agitators. The movement is timely and every good citizen should lend his voice and influence to further it.

But while we are about it, let us be sure that we fully understand what Americanism is, and also whether there is any necessity for extending the effort to others than the foreign born. Perhaps the most concrete expression of the ideals of America is found in the preamble to the Constitution. The purposes of, "We, the people," there set forth are:

(a)—"To form a more perfect union,
(b) to establish justice,
(c) to insure domestic tranquillity,
(d) to provide for the common defence,
(e) to promote the general welfare, and
(d) to secure the blessings of liberty to ourselves and our posterity."

An examination of these principles will show that just now there are others than the radical foreigners who need to hark back to first principles. For instance, the wave of mob violence exhibited in race riots and barbarous lynchings which has been sweeping the country of late indicates a woeful failure on the part of some native-born Americans to measure up to the high standard of Americanism.

The economic strife now existing in this country is largely due to demands and motives which violate every one of the above principles of Americanism. The principle of the "closed shop" will not square with them, and labor leaders must learn that the idea is un-American. On the other hand, capital should know that the denial of the right of collective bargaining is undemocratic in spirit, hence un-American.

There is need for a vigorous campaign in real Americanism based upon the fundamentals, and taught in every school and church to every boy and girl—regardless of their birth-place.

Stabilized Live Stock Values

IT requires an open mind to make the readjustments now needed to put agriculture on a sound and money-making basis. Revaluations and changes are imperative. Fluctuations in prices and increasing costs of production have developed many weak places in our farming, and some of the strong places are growing weaker with the increasing cost of fertilizers and the difficulty in securing competent labor.

The prices of grain and other farm crops during the past few years have influenced many farmers to make abrupt changes in their systems of farming without considering the ultimate effect upon the soil and cost of operating the business as a whole. The lofty figures attained by some of the grain and money crops are proving a strong temptation to abandon live stock farming and turn to growing crops for market. This, we believe, is a step in the wrong direction, for the higher the prices of grain and money crops the greater the importance of maintaining soil, fertility. On the other hand, **one can** hardly blame the average farmer for playing **safe** and accepting the high prices for hay, grain, money crops and live stock, and using the proceeds to pay off his debts. The present slump in the prices of live stock offers but little encouragement to the farmer who has hay and grain feeds. So long as farmers have to depend upon live stock quotations months ahead to determine what they are to get for their hay and grain, which they can market at high prices, today, they cannot be censured for playing the game safe.

Our food problem will never be solved, so far as the production of meat is concerned, until farmers can be shown a safe and dependable system of farm management which includes live stock as a leading feature, and such a system can never be developed until some plan is devised whereby the farmer is assured of a profitable market for his animal products, when they are ready for the market. Farming is a broad undertaking, and if developed along the right lines one must bring the separate departments into a harmonious whole. This can not be accomplished without some assurance of a profitable outlet for the products when they are ready for market.

Another problem which is attracting the attention of farmers more today than ever before is that of making the most net profit. It is not always the man who works the hardest who makes the most money, and money is the only common standard for measuring success in any business. The idea of hiring less labor, growing fewer acres of cultivated crops and expanding the area of pasture and grass lands is taking wide root in the minds of farmers; and there would, undoubtedly, be a return to sound systems of live stock farming if they could be assured of fair prices for the next few years. Unless some method is worked out to improve the marketing end of the live stock industry farmers will curtail production and feed only such animals as can profitably consume feeds that fail to find the ready market.

So long has the production end of farming been preached as paramount that the selling end has been regarded as secondary. This is a mistake. It is not enough that the farmer grow big crops and secure maximum gains on his live stock. There must be economical production and intelligent selling of the products. It is highly important that more thought and study be given to the future market requirements and the distribution end of farming. The easiest money that the farmer makes is that which comes thru economical production and profitable selling. Thru such a system of farming it is not only possible for the farmer to receive more money, but it is quite probable that the consumer would be insured of a regular supply of food at less cost. Stabilization of prices and standardization of products will put agriculture on a profitable basis and insure consumers of an amply supply of food at all times.

Following a conference held with the producers of rock phosphate and acid phosphate at Washington, D. C. on October 6, the Department of Agriculture announced today that after due consideration it has reached the conclusion that, in the circumstances, it would not be warranted at the present time in naming a fair profit for phosphate rock or bulk acid phosphate. The department, however, will continue fully to exercise its own powers under the licensing system against profiteering as well as in conjunction with the Department of Justice. The amendment to the Control Act, recently passed by Congress, carries a provision to the effect that any one who violates the act by profiteering or otherwise shall on conviction be fined not exceeding $5,000 or be imprisoned for not more than two years, or both.

HARRISBURG LETTER

Accurate Farming Data.—Officers of the State Department of Agriculture are very anxious to secure the largest measure of cooperation of farmers and township assessors so that the information asked by the government bureaus at Washington in regard to farming, crops and acreage, may be furnished as soon as possible and accurately. Much will depend upon this study of the farming operations of the Keystone State. With the altered view of business men toward farmers, that agricultural investment is entitled to as much return as capital placed in a business enterprise like a hat store, is bound to be reflected soon in the way of increased appropriations for agricultural education and expert services. Pennsylvania has made strides in recent years and it is believed that with the showing in acreage and crops which students of this state's resources know are to be found there will be greater allowances made. It will also aid the State authorities in planning their agricultural advisory work and in other lines as well as giving local authorities first hand information instead of being forced to depend upon what some one has sad, a fruitful source of complaint in rural property valuations. The state has sent out 20,000 federal blanks and about one-fourth have been returned. Three classes of farms, as has been stated in this letter, are being listed and it is desired to get the information in hand within the next two weeks.

State Crops Good.—From the best information available under the present system the bureau of statistics of the State Department of Agriculture has estimated the crops of the state, putting corn at record breaking figures. If the figures of the several crops are correct, and they come closer to being right than some other estimates that secure greater prominence, the farmers of Pennsylvania will receive large sums for their crops, altho in the last analysis because of the high cost of everything else, the net return will not be so great. The wheat crop showing is 28,011,000 bushes, a gain of almost 2,000,000 bushels, but the yield per acre averaged 17.7 which is a drop. Plant diseases, pests and rains caused much trouble for wheat growers and this is being reflected in late planting. The corn crop is put at 74,176,000 bushels, which is greater than anything ever known. Buckwheat will go to new figures and potatoes will run somewhat better than expected a month ago. Taken all in all, staple crops make a fair showing, altho fruit is down.

A Forestry Jangle.—The old and the new systems of forestry are being brought face to face in the State Forest Commission now. The methods pursued in lumbering have been sharply criticised by some of the members of the commission and as warmly defended. The result will probably be that there will be considerable change in methods and that new contracts and new inspection systems will be adopted.

Immune Potatoes. — Pennsylvania has some varieties of potato that have been found immune from the potato wart, the most destructive of the potato pests that have come to the United States. One of these is the Irish Cobbler and there are some others which it is expected will be brought to the attention of the farmers in time for next year's seeding. If possible the information will be made available this winter to aid in selection. The inspection to localize the wart has been pressed vigorously and it is now certain to be in only four counties.

After More Roads.—Steps to get more toll roads on the free list of the state are being taken by the Highway Department officers. In several instances owners of franchises have been inclined to ask high figures, but when confronted with chances that the Public Service Commission may require improvement in surface conditions and drainage they have generally sold out. In Eastern Pennsylvania four toll roads much complained of are likely to be bought before the end of the year.

Want War History.—State historical authorities have asked for the cooperation of municipalities, historical societies and other bodies in the furnishing of data for the official compilation of what Pennsylvania did in the war. Owing to the fact that the Federal Government controlled the army differently from the way it was done in the civil and Spanish wars the state will not have the same facilities for assembling information as formerly. Hence every man who served in the war or the family of each man should get into touch with the State Librarian in Harrisburg; the War History Commission at the University of Pennsylvania or the historical society of the proper county. In years to come this record will be valuable.

New Arbor Day.—From every indication there will be more attention given to arbor day this year than for a long time. Trees are to be planted in a number of communities as memorials to soldiers and sailors who gave their lives. Dr. Thomas E. Finegan, the State Superintendent of Public Instruction, is strongly urging the observance of Arbor Day and that it also be made the occasion for the inauguration of Rural Life Day.

Weights and Measures.—This city has just had a conference of state, county and city officials in charge of inspection of weights and measures and the reports indicate that the laws are being better observed generally. In some instances it has been found that peddlers have been defrauding buyers, but as a rule things are better. Much is now being heard about standardizing containers and the state will be asked soon to provide an official small group of containers, baskets, etc., and also to get into line with the congressional standard barrel law.—Hamilton, Harrisburg, Pa., Oct. 20.

NEW YORK LETTER

Practical Potato Suggestion.—Dr. Johnathan C. Day, commissioner of markets for New York City announces that a Waterville farmer has offered an "unlimited supply" of potatoes that can be retailed in that city at $1.50 a bushel under current prices. Potatoes are retailing there at $3.50 to $6 a bushel. It would seem an easy matter to cut the retail price in most of our cities by that much or more as potatoes in Central New York are bringing the farmer but $1 a bushel at the car and but 90 cents in some of the heavier producing sections like Cortland County. Even grocers in cities like Auburn and Syracuse pay the farmer but $1 to $1.40 a bushel and retail prices run fom $2.50 to $4. Farmers know they are getting too little in a season that has a decidedly short crop and the wiser ones and those who can afford to wait for their money are putting the potatoes into their cellars. In Cortland County many farmers are getting 150 to 250 or 300 bushels to the acre, where rains have not caused the heavy rot that has swept off the large part of other sections tubers.

Lettuce a Record Crop.—Only six states in the country are now forwarding lettuce. Of last week's total of 124 cars New York furnished 113 cars. For the week previous out of a total of 164 cars, this state grew all but twelve cars. Last year's total of 1,334 cars has already long been left in the rear. The normal shipping season does not close until November 30 and it is expected that late plantings will by that time make a new record in shipments. One year ago we were shipping an average of 50 cars weekly. Cultural methods have improved in recent years and the hamper as a packing container has largely been dropped forwarding being made in a crate specially designed holding 24 select heads. Growers have realized good prices, which at top notch has reached $3.50 to $3.75 per crate. Present ruling are around $1.50 per crate of 24 heads.

Forest Policy Outlined.—At a conference on the forestry policy of America to be held in Syracuse, Nov. 11, Dean Baker of the New York State College of Forestry has been chosen to present the views of state forestry leaders, who will advise with him before the conference. Geo. N. Ostrander, president of the Empire State Forest Products Association and George D. Pratti, conservation commisser for New York State will preside at two sessions. A large attendance of lumber manufacturers and retailers is assured also of the American Pulp and Paper Association, whose members will stop on their way to a conference in New York later in the week. Dean Baker will address the latter convention also.

Cheese Prospects Better.—After five weeks of failing to agree with buyers on prices offered for cheese the salesmen of our leading Dairy Boards this week secured a price. The Gouverneur board got 28½ cents, Watertown, 28¾ cents and New York 29½@29¾ cents. The Plymouth Wis. quotations which have been the basis of quotations here were 26½ cents last week. The sales totaled unusually heavy as compared to those of the week last year.

State Fair Camp Ground.—There is a demand for a properly policed and sanitary camping ground at the state fair where farm families coming by motor cars can spend the night. This has proven very successful in Iowa. It encourages longer attendance at the fair with much more benefit to farm visitors as evening meetings can be held addressed by noted agricultural leaders. The plan calls for a new auditorium. Farmers also want a covered pavilion for juding the valuable cattle entries. With generous seating capacity so that they may watch and benefit by the work of the judges in placing awards on these superior animals. This is the leading live stock event in the state yet profits dairymen almost nothing educationally as judging is done in a sawdust ring with no provisions whatever for spectators, while the horse awards are placed before a grand stand that seats thousands of spectators.

Better Freight Rates. — Wayne County farmers with peach growers of Monroe and Niagara counties have organized in the interests of securing better freight rates on peaches. The rates on apples are now 22½ cents, on lettuce 27 cents and on peaches 53 cents. They will confer with Director Walker D. Hines, of Washington.

Aroused Over Farm Policy.—The act of the Governor in recommending the dismissal by the Council of Farms and Markets of Dr. Eugene H. Porter, as Commissioner of Markets, on charges made by the Governor's special investigator, George Gordon Battle, has roused farmers of the state. The Governor, it is conceded by all, tho a Tammany representative was elected by the farmers in a reaction against gubernatorial policies of the office the preceding term and as might have been expected he has disregarded their interests, and is now openly attacking them in this act. Dr. Porter was charged with being "too incompetent to hold the position, and that his admisistration of duties had been inefficient." This inefficiency, so far as rural people can learn, has consisted of working for farmers' interests in many ways, such as uging the passage of the feed bill requiring feed bags to state the contents if above a certain percent of worthless by-products were used, and in standing for fair prices on milk. The administration has not favored these just measures, but seems to favor restricting farmers' prices to a ruinous degree, while doing nothing to control wholesalers,' jobbers' and retailers' profits.

No Prisoners For Road Work.—Prohibition is credited with such a reduction in the number of prisoners in Jamesville penitentiary that none can now be had for road building. Only 15 are sent out now from that institution to work in a near by quarry, when a year ago there were over 400 in the institution. The highway commissioner finds this scarcity of prisoners for road work a handicap in carrying out tho road programs for the year.

Milk Guessing Contest Won by Woman.—Commissioner Agriculture Wilson announces the winners in the new and interesting guessing contest conducted by the Council of Farms and Markets all thru the state fair. Nine cows were on exhibition, known by numbers only, with their milk records for the year, which varied from 4,000 lbs. to over 20,000 lbs. There were about 4,000 guesses handed in on blanks made for the purpose—the object being to credit the right records to the various cows. It is significent to note that women won three of the seven prizes which totalled $1,000 in value. The first prize was won by Mrs. Nelson Thackeray, of Guilford, the prize being a valuable purebred bull calf. The second prize also a calf, was won by H. E. Criswell, Vernon Center; third prize, bull calf, Earl D. Crockett, Sennett, fourth prize, $40 cash. Florence E. Landers, Marathon; fifth prize, $30. Miner Owen, Wellsburg; sixth, $20, S. B. Frair, Owasco; seventh $10, Mrs. Irving Wilsey, Savannah.

NEW JERSEY NOTES

State Federation.—A State council of County Boards of Agriculture has just been organized and officers have been chosen. The County Boards of Agriculture of New Jersey formed the State Federation in line with the action of County Bureaus in leading states. The purpose of the State Council or Federation is to consider the best methods of organization work for rural development and to support every measure that might tend to further rural life and better production and improved market facilities. H. E. Taylor, of Freehold, is the president of the council; A. Lozier, of Ridgewood, vice-president and Joseph E. Barton, of Marlton, treasurer.

Mercer Exhibits Won Prizes.—The Penn's Neck Canning Club won first place in the club exhibit while the Pennington Road Club took second position. In the fat hogs' exhibit Mercer County easily won first, second and third prices. Arthur Coward, of Princeton Junction, had the largest and best fat hog. The first prize for this contest was a pure-bred sow pig. An extensive exhibit of pure-bred sows owned by boys and girls of the county interested in pig raising was one of the features of the exposition, and if space were available, there would have been more on display. The sow and litter contest in Mercer County happened to be only project of the kind in the state and attracted considerable attention. William Kyle, of Princeton Junction, who won first prize, had a choice of a pure-bred sow or a pure-bred boar. In competition with a large number of boys from various parts of New Jersey in a potato growing project, Mercer County took first and second prizes. The first pize winner was Raymond Tindall, of Dutch Neck, while the boy who won out second was George Farley, of Hopewell. The potato growing project is one which undoubtedly will attract more and more attention in Mercer County as time passes and will be developed extensively next year. The exhibit of the Mercer County Poultry and Rabbit Club also drew prizes at the fair this year. First place in singles was awarded to a Buff Leghorn belonging to J. J. Vos, of Princeton, and first to a pen of white Wyandottes belonging to Alstyn Smith, of Titusville, while Samuel Cooley, also of Titusville, also took first on his Barred Rock pullet. In the Leghorn class, Milton Raible, of Hopewell, won second prize for his pen of White Leghorns. In the rabbit exhibit, Latimer Lawrence, of Pennington, took second prize for his pen of rabbits. In the story and record section of the exhibit three of the Garden Club members of Princeton won first, second and third prizes for their essays on the gardens which they raised this year, while Helen Bainbridge, of Hamilton Square, took second prize for the record of her work in the Hamilton Square Canning Club.

Degrees Conferred By Grangers.—Worthy Master Walter H. Havens, of Cranbury, and other officers of the State Grange conferred the sixth degree, or the Degree of Flora, upon a class of 200 candidates in the auditorium of the high school at Flemington during the week. The fifth degree, or the Degree of Pomona, was also conferred upon a class of 75 candidates at the same gathering. The latter degree was in charge of J. Spencer Dilts, of Three Bridges, who was assisted by the officers of Riverside Grange of Three Bridges.

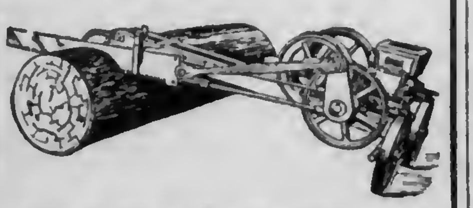
No Damage From Frost.—The temperature in New Jersey was near the freezing points some mornings during the week and there was some frost without any damage being done to crops. The cutting and husking of corn is now in full swing in all sections of the state at the present time and will soon be completed, while harvesting of apples and potatoes is about finished. In southern counties, tomatoes, lima beans and late potatoes need about one more week to attain maturity.

Success sometimes means a fine farm and a bank account, and again it means a fine lot of boys and girls in the home.

Easy Now to Saw Logs and Cut Down Trees

Only one man, with the improved Ottawa Engine Saw Log easily cuts 25 to 40 cords a day. This machine has a heavy cross cut saw driven by a suitable gasoline engine. The entire rig is mounted on truck wheels to make it easy to move to the logs, and from cut to cut on the log without stopping the engine.

For moving on the road, the truck wheels are placed on a pair of side axles



Only One Man, With This Power Log Saw, Cuts 25 to 40 Cords a Day. Only Five Seconds to Set from Cut to Cut on Log.

and the rig is hauled straight ahead. When set for sawing beside a log, the truck wheels are placed on a pair of end axles to move the rig sidewise along the log, for moving quickly from cut to cut. Only five seconds required to move from one cut to another.

The same machine can be fitted for sawing down trees. The saw is driven by direct gearing from the engine crank shaft. An automatic friction clutch stops the saw in case of undue saw resistance. The engine has twice the power needed to drive the saw to full capacity in the largest logs. Two men can fell 40 to 50 trees a day in ordinary timber.

The whole outfit is compact, simple, durable against a lifetime of hard wear. It sells for a low price and is fully guaranteed for reliable operation in the hands of every one who has trees to cut down and logs to work up.

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HORTICULTURE

CIDER AND VINEGAR MAKING

By J. P. STEWART.

In this year of general high prices, it is not surprising to find the price of cider also on the up-grade. The high prices offered for canning stock, the increased cost of making, the new internal revenue or manufacturer's tax of ten percent of the selling price which has been imposed upon it, and the increased demand in some quarters as a result of the present general drought, have all contributed toward the general uplift in the price of cider. With all these points granted, however, we were hardly prepared to find it selling for as much as a dollar a gallon in sterilized glass containers, which proved to be the case in some of our local groceries; and its selling price in bulk in the same groceries was usually not less than fifty cents a gallon.

The Kind That Brings High Prices

This information is given primarily in the interest of the producers who have been offering it as low as eleven cents a gallon according to some reports, altho this particular producer is also reported to have thought that he should have twelve cents for the next lot. In view of the current retailer's prices, we feel that the producer ought to have at least thirty cents a gallon, especially when he has to pay both the revenue tax and the cost of making, besides furnishing and hauling the apples.

With these remarks on prices out of the way, we may give some attention to methods of making. Many people seem to think that any kind of an apple handled in any kind of way is still good enough for cider. They knock the apples off the trees, gather everything up regardless of amount of rot and dirt, dump them into a wagon, tramp around over them with boots of doubtful cleanliness, and shovel them into the cider press at once, regardless of ripeness. It is probably such cider as this that is seeking a market at the lower prices noted above. It is undoubtedly dear at any price.

For really good cider, the apples should be clean, free from worms and rot, and be well ripened; that is, they should be neither over-ripe nor green. When fully ripe the apples contain the most juice and also have the highest sugar content and the best flavor. The variety also should be at least reasonably good for eating out of hand. If the fruit is too green, it should either be left on the trees until it becomes properly ripened, or else it should be ripened up in piles. If the fruit is wormy or partially rotted, it should be sorted to remove the objectionable specimens, and if it is dirty, it should be washed. Discarding the culls and washing the good apples in a tub or with a hose, will take very little additional time, and it will make a great difference in the final quality and palatability of the cider.

When the fruit is ground, the grinders should be adjusted to cut as fine as possible, as coarse grinding will not secure all the juice. With proper grinding and pressing one should obtain about three and a half gallons of cider to a bushel of good apples. It is usually better to confine the pomace with a clean coarse cloth or sack before pressing, as this enables the pressure to be applied more effectively. To catch the cider, use either woolen or enameled vessels, as the acid in the cider may act on ordinary tin or iron vessels with undesirable results.

The cider should then be poured or preferably strained into clean barrels or casks. Clean containers are important, either new or sterilized with steam, as any others are likely to add undesirable flavors or injurious organisms. It is then ready for market, if it is to be sold at once as sweet cider. If it is necessary to hold it for a short time wihout fermentation, this can be accomplished by the addition of benzoate of soda at the rate of one tenth of one percent, or at the rate of about two-fifths of a point of the benzoate to a fifty gallon barrel. This preservative cannot always be used, however, on account of legal restrictions, and these should be looked into before making the addition. It is usually permissible in cider handled in bulk, but not in bottled ciders.

Making Cider Concentrate

Where the necessary machinery and other facilities are available, it is possible to have sweet cider the year around without any artificial preservatives, by a process of concentration worked out by the Federal Department of Agriculture. This process requires the freezing of the fresh apple juice, grinding the frozen product, and then by means of "a centrifugal process, separating the essential cider solids from the frozen water, in much the same way that cream is separated from milk." In this way, five gallons of fresh cider can be reduced to one gallon of sirupy cider concentrate, which will keep sweet much longer than the ordinay cider and in cold storage can be kept indefinitely. Its reduced bulk also makes such storage practicable.

When desired for use, the cider concentrate can be restored to its original condition and flavor simply by the addition of ordinary drinking water. It thus offers an opportunity to have fresh cider available thruout the year, which should be especially valuable to soda fountains. In order to be commercially practicable, however, it apparently needs to be made on a fairly large scale, and preferably as a by-product in connection with a commercial ice plant located in a good apple section. Detailed information on the process and the machinery needed can be obtained free of charge from the U. S. Department of Agriculture, Washington, D. C.

Changing the Cider Into Vinegar

If the cider is to be made into vinegar, there are cetain steps which must be followed closely to insure the desired results. In the first place, it should be poured as before into new or sterilized barrels, but these barrels should not be filled more than three-quarters full. The bunghole should then be plugged loosely with cotton or a similar material, which may be enclosed in cheesecloth to facilitate handling. This will permit the necessary interchange of air and carbon dioxide, and will keep out insects and dust. If still better circulation is desired, it can be obtained by boring a hole in each end near the top and plugging them similarly with cotton.

The first action which follows is the changing of the sugars in the cider to alcohol, and is known as the alcoholic fermentation. It proceeds best when the temperature is kept between 65 and 75 degrees Fahrenheit. It can also be accelerated by adding one cake of compressed yeast to each five gallons of cider, tho this is seldom really necessary. The fermentation will be very rapid for awhile, but will gradually quiet down and will be complete in a few weeks. No "mother" or other vinegar starter should be introduced until this fermentation is finished, as it will tend to interfere with the production of alcohol and will thus weaken the final product.

As soon as the cider becomes quiet after the alcoholic fermentation, the clear liquid should be racked or siphoned off into clean or sterilized barrels to get rid of the sediment. The latter may not be harmful, but it sometimes seriously interferes with the later action and hence should be left behind. The new barrels should be filled and plugged as before and kept at the same general temperature. In this stage the alcohol is converted into acetic acid by other organisms, and the process is known as the acetic fermentation. When the temperature is kept within the range of 65 to 75 degrees Fahrenheit, the acid is formed more rapidly than in a cool cellar, and under normal conditions the full strength of the vinegar should be reached within about six months from the pressing. Old vinegar barrels, however, if used without proper sterilization, may contain molds or other organisms which can develop very obnoxious flavors or even destroy the acid itself, and leaves a worthless liquid.

When the vinegar has become strong enough to test at least four percent of acetic acid, or four and a half percent where that is the legal rate, the clear liquid should again be racked or siphoned off into clean barrels. This time, however, the barrels should be filled full, and the bung be driven in tight to exclude air, and then be placed in a cool cellar to check further action and keep the vinegar from spoiling.

The additional time and attention required to produce vinegar makes it cost about two cents a gallon more than the sweet cider, but its greater permanence and longer period for marketing under normal conditions make it the much safer product for manufacture on a large scale. Just at present, however, it is probable that the greater profit is to be made from the fresh cider, wherever a sufficiently broad market is available.

THOSE DISEASED PEACH TREES

It is safe to say that there are several thousand peach trees in the county that have either yellows or little peach. There is no cure for either of these diseases; the only measure known to be effective is to take out the trees just as soon as they show the first signs of either of these troubles. During the summer and fall the symptoms of these diseases show more plainly on the trees. It would be decidedly to the advantage of our peach growers to go over every tree carefully right now to locate the diseased trees, and then remove them immediately.

Yellows is shown by premature ripening of the fruit. This often happens on only one branch of the tree. Another unmistakable sign is the characteristic slender shoot with numerous narrow leaves coming out from a main branch and in the interior of the tree. The leaves on these shoots frequently have ret spots.

Little peach disease is indicated by the irregular ripening of the fruit; some fruits are small and the tendency is for all of them to ripen later than on healthy trees of the same variety. There is also a characteristic appearance of the leaves; they seem to hang down, to become narrow, and to curl back on the midribs. An experienced peach grower can usually spot a tree with little peach disease a hundred feet away by the appearance of the leaves.

Celery Like This Is Always Tender

If the diseased trees are not taken out the trouble will spread next year to adjoining trees. Some men have tried to temporize with these diseases by cutting out the bad limbs or by dehorning the whole tree to induce a vigorous growth of young shoots. Neither of these measures will get rid of the disease. Take out the diseased tree and do it as quickly as possible, removing the trunk and main roots. A tree left in only a month or two after the disease has appeared is very apt to be surrounded by diseased trees next year.

Somtimes peach trees will become sickly-looking for causes other than little peach or yellows. Winter injury is one of these causes and a bad dose of borers is another. A tree much weakened by either of these causes may as well be taken out. It is difficult to make a good tree out of one that has been seriously weakened.—Camden Co., N. J. Bureau News.

TO BLANCH CELERY WITH EARTH

If celery has not already been blanched, the following suggestions from the college of agriculture at Ithaca may prove helpful. In the small garden blanching can be done with earth by pushing the soil up close to the plants. At first only a little soil should be placed against the celery; but gradually the soil level should be raised until only the top of the plants are exposed. After this stage has been reached, from one to two weeks will be necessary to blanch the crop properly. The earth should be packed closely about the plants or the blanching period will be longer.

It is not necessary to have the crop mature before blanching, as both processes can go on at the same time. If it is not practical to use earth in the garden, 10-inch boards or heavy paper can be used. The boards must be close to the plants and supported or braced by stakes driven in the ground at frequent intervals.

The late crop of celery is sometimes blanched in storage. An old hotbed or trench can be used. The plants should be completely covered to protect them from severe weather and to keep out the light. In order to blanch in storage it is necessary to harvest the crop with some of the roots remaining, since growth, altho slow at this time, must continue if the best quality of celery is to be produced.

PICTURES FOR NURSERYMEN

Some days ago I was in a noted nursery getting some trees for the farm. I was standing by the proprietor waiting for the order to be filled when a man and his wife came in to get some shrubbery for the house. They had just built the house and had the lawn graded.

Instead of telling the nurseryman just what they wanted—they really didn't know—they had taken three pictures of the place, from different sides of course, so that this nurseryman could tell at a glance just how the house stood, all about the porch, which way it faced and so on.

He studied this set of pictures a few minutes and began to make suggestions for the buyers and told them about what the vines and shrubs that he suggested would be like when grown. It was only the work of a few minutes to get out that order and have it packed.

No doubt things of that kind have been done many times before. I dont know. But to me, it is a new idea and it is a worth while one for a lot of us farmers who want to improve the looks of our farm residences. Usually, a nurseryman who is a successful one has an eye for correct placing of such vines and plants as he has to sell and he usually has the ones to sell that look right and are satisfactory in a majority of cases. So it is a pretty sure shot that he can do the job for you properly.

I know that in this case if these people had sent these pictures to this man by mail and had written just what they wanted the effect to be and how much they wanted to pay they would have had just as good a selection as they got by making the trip there.— E. Rogers.

Many perennials and shrubs may be divided this fall or early next spring, and reset to good advantage.

Do not forget to lift some of the geraniums, salvia, asters, or other plants in the yard or garden. They will bloom in the window this winter.

A drain tile set over each plant is a good method of blanching celery. Celery for winter storage should not be blanched before putting in the cellar.

Plant tulips in the garden or border in October. Tulips, narcissus, daffodils and hyacinths planted now in pots or boxes and put in a cool place will give good flowers next spring.

FARMERS MUST FIGURE THE HIGH COST OF LABOR

JUST AS MANUFACTURERS DO

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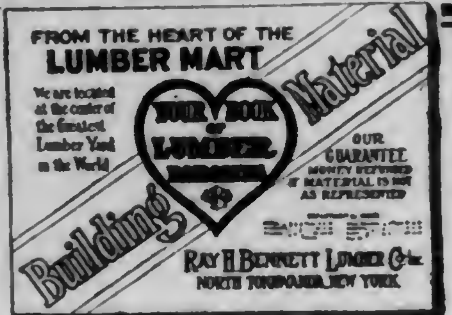

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DAIRY

THE NATIONAL DAIRY SHOW

Once again, after a lapse of five years, Chicago welcomed the National Dairy Show, and right well did she try to entertain its people so that she may retain the mighty exhibit in future years. Weather was ideal, arrangements were complete for the most part, and large crowds daily surged thru the turnstiles. It was Manager Skinner's big week. Exhibitors and visitors alike seemed to appreciate the reduction in length of show to a single week, for it allowed opportunity to see more judging and attendance at more meetings in less time, and the cattle were not retained so long.

The Machinery

No National Dairy Show had more complete machinery exhibitions, and every material and machinery from the feed to the finished dairy product—yes, and even babies fed on it—were on display. The feed manufacturers were there in force, showing how their grain mixtures are designed to increase milk flow.

This Kind of Equipment Costs But Pays in the End

Barn equipment—stanchions, ventilating systems, floors, separators, milking machines, feed and litter carriers, blankets, forks and what not—told the farmer-visitor various means for reducing labor to a minimum. The manufacturer was even better represented by manufacturers' booths where were displayed separators, churns, bottling machines, pasteurizers, coolers, clarifiers, etc. An added feature this year was an exhibit of motor trucks, filling one wing of the building.

Educational Exhibits

The greatest educational feature of the show, aside from the judging of cattle, was the exhibit of the U. S. Dairy Division, which occupied one large wing altho secluded somewhat and hence overlooked by many.

The food value of milk was one of the chief lessons taught in this display. A dairy show was given by girls, called the "Milk Fairies," while talks were given by food authorities and demonstrations were held in infant welfare work.

That milk makes boys and girls husky was shown graphically by experimental rats in the government exhibit. Those getting no milk but fed on grains alone made practically no gain, but when given a little butterfat were soon as vigorous as their brothers that always got milk. The vitamines in butterfat are essential to the growth of all young animals whether it be rats, pigs, calves or our own children. Swollen, sore eyes in rats deprived of milk were soon cured by feeding a little of that dairy product each day.

Good meals for growing children were displayed. The high food value of cottage cheese as a source of energy and protein was shown, and its use makes a big cut in the meat bill. Co-operative bull associations and cow testing associations are now a large part of the federal dairy work, and there were on July 1, 79 of the former and 385 of the latter. Three bulls in such co-operative associations increased the yearly butterfat yield of their daughters over those of their dams 62.2, 55.2 and 115.5 pounds, respectively, in 1916. One bull shown in the exhibit was mated to a 266-pound cow, and the daughter made 481 pounds, the increase being due to prepotency of a good sire.

Animal diseases, particularly tuberculosis and contagious abortion, were pictured in all their seriousness. Dairymen appreciate more each year the necessity for tuberculin testing, and enormous gains were reported last year in federal testing. Ohio had 262 herds that successfully passed their first test.

Requirements for keeping a cow one year took one good sized room for accommodating the animal, her feed and her product. This survey was conducted on 737 cows in northwestern Indiana. It showed that these cows, averaging 6,937 lb. milk a year, ate 2,046 lb. grain, 3,301 lb. hay and stover, 7,276 lb silage, pasture worth $10.36 and required 720 lb. of bedding, 164½ hours of man labor, 16⅕ hours of horse labor and overhead expenses amounting to $27.11. The milk, calf and 6.8 tons of manure constitute the credits.

There were also model creamery office, creamery testing room and a farm milk house where milk could be kept cool by either ice or running spring water. The booth on sterilization of dairy utensils had a simple home-made sterilizer on a gasoline stove and another hot-water sterilizer over a brick firebox.

Products of the government creamery at Grove City, Pa., included various cheeses, condensed milk, butter, cream, buttermilk and kindred articles. Southern cheeses were displayed. This year there are 52 factories in the Carolinas, Georgia, the Virginias and Tennesse, and last year, they sold cheese worth $289,000.

The Bureau of Plant Industry showed various feeds for dairy farms, emphasizing the need for home-grown protein. The Bureau of Markets tried to inform the public on its valuable (?) market reporting service, but it is still too deep for us.

Students' Judging Contests

The Kansas team was the lucky trio in the students' judging contest fostered by the U. S. Department of Agriculture. For their accurate guessing they received the National Dairy Association cup. South Dakota and Iowa were second and third, respectively. Fifteen teams competed. Coaches are trying to have the rules changed so that more equitable final placings will be made.

J. J. Jestin of Purdue University, won the Jersey scholarship for highest score in that breed. Taylor, of Massachusetts, was awarded the Holstein scholarship. The scholar- was awarded by the De Laval Separator Company for highest -ranking individual went to Roy Ingham, of Nebraska. The Iowa team ranked first on Guernseys, Cornell first on Ayrshires, Missouri first on Jerseys and Kansas first on Holsteins. Ohio ranked seventh, altho fourth on Jerseys, third on Holsteins and fifth on Ayrshires.

Ohio won the cup for highest team judging cheese. Iowa took the butter cup and South Dakota the milk cup.

The Cattle Show

Cattle unsurpassed in numbers and quality convened in Chicago last week. There were approximately 900 in the open classes, and some estimated fully 1,200 were on the grounds. Quality beyond compare was universal in all the breeds, and to be left out of the money was no disgrace. Many were the state fair winners that did not get a ribbon there. It was a battle royal of champions against champions, and many a decision was made on a narrow margin. Judges Kildee for the Ayrshires, Dempsey for the Jerseys, Moscrip for the Holsteins and Hope and McKerrow for the Guernseys gave satisfaction thruout.

The National Dairy Science Asso'n passed a resolution asking for the colleges and experiment stations to release them from testing dairy cows on tests for less than 10 mo. in duration.

The Holsteins

The Holstein show was unusually strong, but with only one herd east of Illinois. Minnesota, Illinois and Wisconsin furnished most of the entries. The aged bull class had 13 entries and brought out much style. The veteran show winner, Paul Calamo Korndyke, now 13 years old, still showing remarkable quality, trueness of lines and unusual depth of middle, met defeat by two Iowana bulls, Iowana Sir Olie taking first and later grand championship, and Iowana Mercedes Homestead (owned by Iowa State College) second.

Old Minervo Beets, 14 years of age, came back strong the sixth time for premier female honors. Altho she has a record of only 17.8 lbs., she shows wonderful digestive and mammary development. She still carries a straight top and has remarkable refinement, but age is telling and this may be her last season.

The Jerseys

The Jerseys comprised the largest part of the show, the aged cow class alone having 44 entries. The bull classes were likewise closely contested. Fauvic's Prince finally led the aged class, winning thru his superior quality, massive, bold carriage and wonderfully true top line. Another contest came in the three-year-olds when Leda's Raleigh, Brookwood's son of Raleigh's Fairy Boy, was placed over Longview's entry, Poet's Whiteheart, a consistent winner this year till his stablemate was put over him at Waterloo. The superior handling qualities, great width and depth of middlepiece, and smoothness of body made him hard to beat. Likewise the straight top, wide-sprung, deep rib and bold carriage of Chief Raleigh, Longview's two-year-old, put him easily first in his class. Still he did not show quite the character, refinement and masculinity of Leda's Raleigh, that finally was made grand champion. An Ohio entry, Noma's Perfect Raleigh, won junior championship.

The Ayrshires

The bonny Scotch cow never made a greater show on American soil than came from the herds of Gossard estates, Adam Seitz, Wendover Farms and J. A. Ness. Strathglass Gold Chink won senior championship; he shows a grand top line, unusual depth and spring of rib, but his lack of snap and bold carriage and lightness in fore end lost him grand champion honors. A yearling was shown by Wendover Farm that had exceptional scale and finish, straight top line, good handling quality, unusual length of middle and harmony in all parts.

Two famous cows met defeat for aged cow honors. White Heather of Torr, owned by Wendover Farms, showed large roomy middle and a pliable square udder, but was narrow in the rump and plain at both ends. Highland Polly carried an exceptionally large shapely udder, but after milking it showed a meaty texture and was not evenly balanced. She is just a little coarse in head and rump. Of a little more refined type, smoother blending of parts, more milky character was the first prize winner. Imp. Chapmanton Nell 3d, owned by Adam Seitz. She was showing dry, but with an udder of exceptionally fine texture and teats squarely placed.

The Guernseys

Chief interest in Guernseys centered about the bull classes, especially the aged class where Imp. Itchen May King, grand champion at the Panama Pacific, met Ladysmith's Cherub, thrice grand champion at the National. The Shorewood bull was finally placed first; but at the ringside the greater refinement, broader rear end and straighter top line of the California entry seemed to merit a higher rating.

A son of Hayes Cherub 2d and Princess Bergere, both National champions, was made senior champion over Ladysmith's Cherub. The two-year-old showed remarkable scale, straight top, large heart girth and width carried well to the rear. Still he is a little plain about his head, a little coarse thruout, and this lack of refinement lost him grand championship. The yearling son of Itchen May King, showing more open conformation, more highly colored secretions, cleaner head and throat, longer rump and wider heart girth carried off the purple banner.

Problems in Mixing Balanced Rations

A few of the obstacles that every dairyman must overcome in providing his cows with economical, balanced rations:

1 How to determine the exact food requirement of cows for maintenance and milk production.

2 How to determine what feeds will combine to meet the standard and form a balanced ration when fed with the available roughage, be palatable and form a proper mechanical mix.

3 How to get the necessary feeds **at lowest cost.**

4 How to secure **all** the feeds that are needed.

5 How to maintain the nutritive standard and avoid loss resulting from sudden changes or improper balance, when some of the feeds cannot be obtained, or when roughage must be changed.

6 How to mix the feeds to avoid uneven results in mixing by hand and insure exact uniformity.

7 How to reduce the loss by shrinkage and high labor costs in hand mixing.

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1 Requirements for maintenance and milk production are determined through the services of the best feed and nutrition expert obtainable.

2 The combinations of feeds that will meet the standard have been determined through research work of the **TI-O-GA Feed** expert and proved by extensive use in feeding.

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4 **TI-O-GA Feed Service always** has access to all available sources of feed supplies.

5 **TI-O-GA Feed Service groups all roughages into 3 classes and provides a feed to form a perfect balanced ration with each class.** Changes in roughage may be made without unbalancing the ration by use of the feeds as intended.

Red Brand TI-O-GA Dairy Feed to be fed with ensilage, pasturage, green fodder or low protein roughage.

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6 Use of modern machinery and special manufacturing methods enable TI-O-GA Feed Service to maintain perfect uniformity in mixing.

7 The labor cost of machine mixing is nominal and very much less than hand mixing.

TI-O-GA Feed Service represents a real saving and furnishes the benefits of expert service in TI-O-GA Feeds.

Investigate TI-O-GA Feed Service by sending at once for Book containing valuable information on feeding and conservation of home grown feeds.

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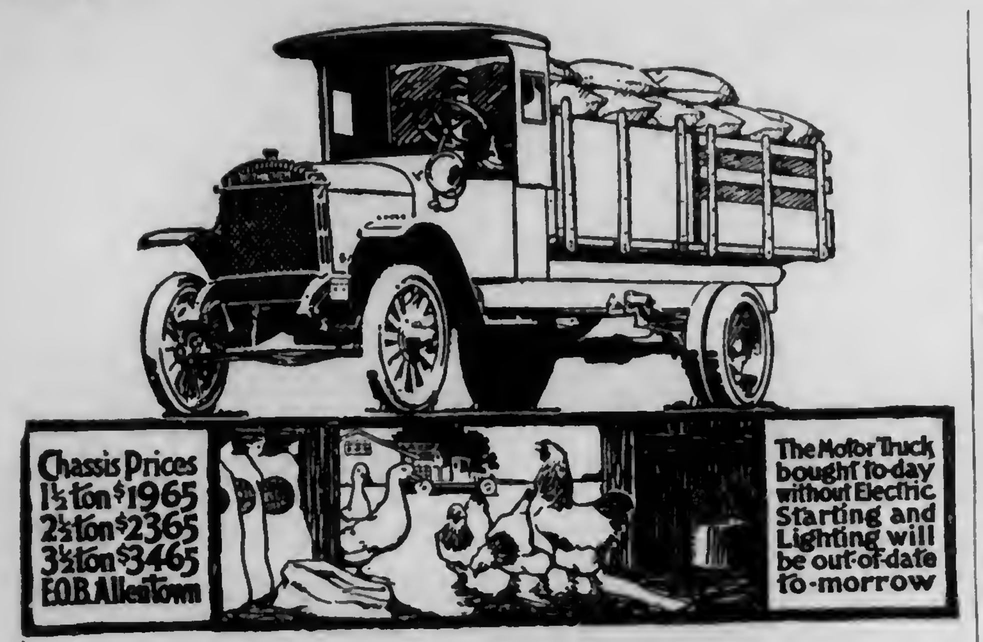
Tioga Mill & Elevator Co.
Waverly, N. Y.

TI-O-GA FEED SERVICE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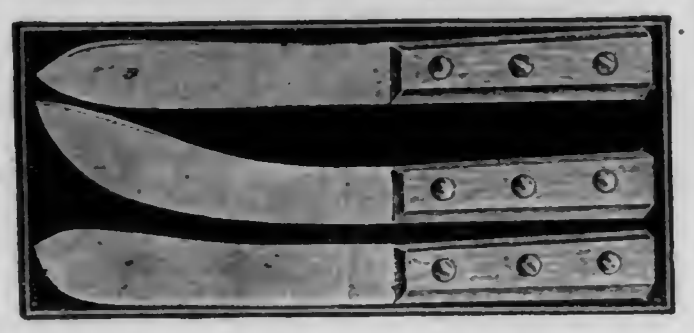

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Nothing is more essential than good, sharp butcher knives and plenty of them. This ideal butchering outfit is just the ticket. A knife for every purpose. Six-inch blades, brass-riveted handles.

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PENNSYLVANIA FARMER, 261 South Third Street, Philadelphia, Pa.

NEW YORK DAIRY NEWS

Dairy farmers are still too busy to take very active interest in the range of milk prices. They keep fairly well posted and deplore what seems to be a somewhat downward trend, comparatively of prices on fluid milk. They recognize and regret the government's attitude in respect to depression of food costs so far as farmers are concerned, for they see clearly that this attitude affects unfavorably only the producer of the food stuffs, not the purveyor of them. They see that the cost of living has advanced no more than wages and in some cases not so much and that shoes and clothing as a part of living expenses get much more of the advance than does milk and potatoes and foods generally. Recognizing these things they are annoyed, but instead of halting and striking they kept on working. If they were labor union men, with the sort of ideals those people have, there would be a good deal more said and done.

This condition of "socking it" to the farmers has been expected by any who remember earlier experiences or who have kept track of the history of similar times. Such schemes were worked after the Civil War, and then there was a much larger percentage of farm folks than now. Then the farmers were more poorly organized than now, but even now our organizations are not strong enough to meet evenhanded those organized against the farmer. It is well for us to keep these things in mind and to stand solidly for our organizations. They can help us a little, and general information as to the effect of certain activities to depress our prices is much better than at any previous time. Manufactured articles have generally speaking advanced a hundred percent or more since five years ago, some of them a good deal more. Wages are said to have advanced 80 percent and living expenses the same. Milk and other farm products have advanced much less than 80 percent, but feeds are up more than a hundred percent. Even hay and silage have about doubled. I regard dairy farmers who can work hard as fairly prosperous, but not to the extent that wages and capital in manufacuring are making profits. It is true that some manufacturing concerns pay heavy taxes, and labor is living to the limit generally and not saving as they should.

All these things the dairymen know, and they feel resentful when told that the price of October milk will be cut a little from the September price and not advanced as October milk usually does and should. Further, they object to having the price cut all thru the winter as many think probable. Grain will have to be fed more liberally in October than earlier, and should be fed more largely now than it was in June. I believe it is being fed more largely than in June or July, but dealers tell me that they are not selling as much as they did then. Relatively, less is fed. Relatively, the price of milk is lower. Some feeds have dropped a little in the local market, and considerably in the wholesale market. It may be a good time to buy some feeds but one hardly knows. Whenever one finds a good bargain on a feed now it may be well to pick it up. I cannot see reason for any very considerable decline in feeds before another May or June. There may be some decline in now and then an instance, but feeds are sure to be high this winter unless what now seems impossible should happen. For the man favorably situated there is likely to be a little profit this winter, but not a profit commensurate with business, and in many cases there will be no profit.

As stated before, farmers are too busy to look at outside matters, still they keep in mind the Dairymen's League cooperative project. This is moving slowly as it should and farmers are not in any sense antagonistic. Only occasionally do we hear of a branch incorporating, but there may be about 10% who have done so. If there are as many as that it is likely that the project is moving as rapidly, as it should. We must become well acquainted with the conditions and the dangers must build up to it. It would be bad to come down very much after we make a decided start. It is possible that the affair may not be consummated until we meet another crisis. Let the dealers become arrogant and vindictive again and they would force quick action on the part of dairymen. It seems possible that they realize this themselves and that they may try to avoid a crisis. On the other hand they may try to crush the League some day before any concerted action can take place. This is not now apparent but is possible. The policy of a deferred struggle now looks more probable. Price of milk is more likely to be governed for a time upon market conditions rather than upon the cost of production. These market conditions present and prospective need closer study than they are getting yet.

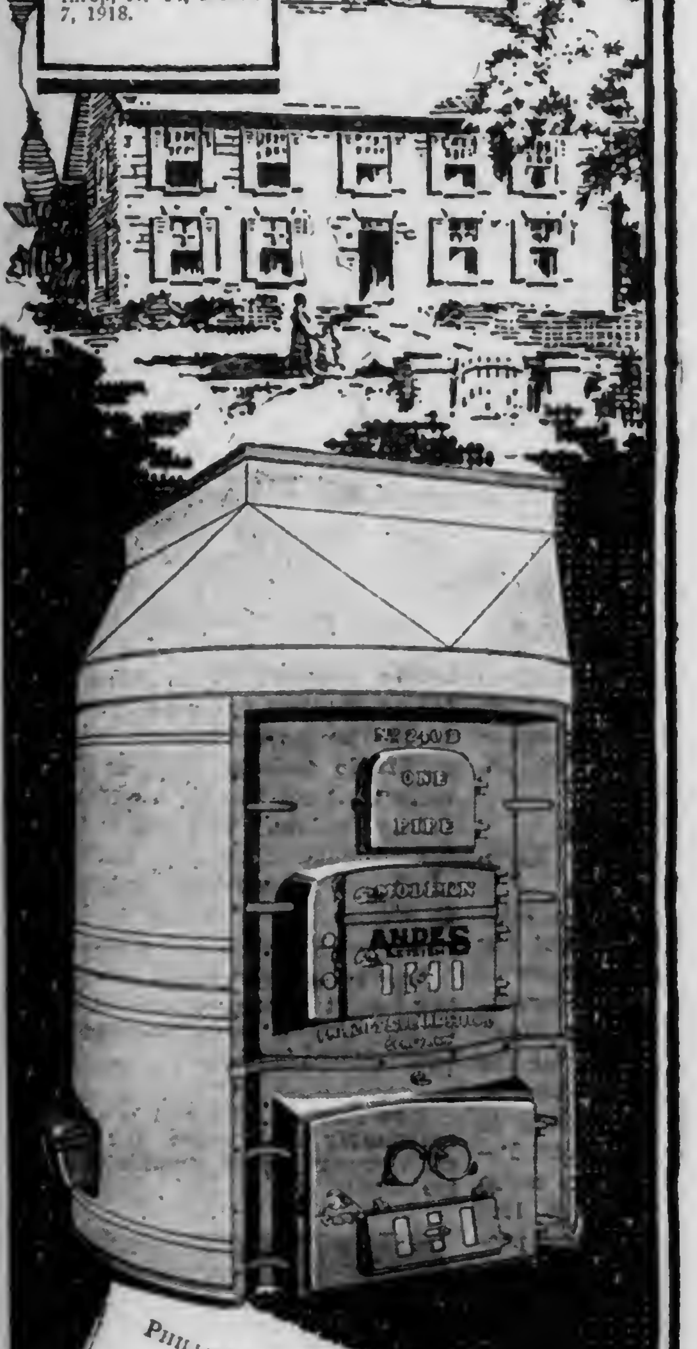
Our corn crop in this milk-shipping district is unusually good and the portion of it harvested up to the twenty-fifth of September is in good condition. Considerable is still to be gathered and frosts are now a daily possibility. Nearly all the corn is for silage and the supply will be satisfactory. Hay is also quite plentiful, and the consequent demand for cows is satisfactory to sellers. Prices have not yet declined from the former high level, and dairymen say they can as readily make a cow pay for herself at a hundred and fifty dollars now as at fifty a few years ago. How long this may continue no one seems to be confident. We are not looking for any decisive drop the coming winter. Roughage feeds will be used liberally, but grain feeds will hardly be called for as last winter and early summer, altho this will depend on milk prices. These are now estimated at some discount. Indeed October takes a drop of ten cents a hundred, and is $3.11 at 200 miles from New York for three percent milk. The pre-war October price was about $1.90 for about 3.6 percent milk. Any commodity that has not doubled since then is cheap. Milk is too cheap.

Apparently the League is strong. The division of the League office having the sale of the products of the cooperative plants and taking the place of the old country milk company is said to be making good altho still operated at some loss to the League. This is entirely distinct from the cooperative project previously referred to. This project is expected to take over the cooperative department in the League when it shall have been fully developed. At present the proposed large project about which we say so much is handling no milk at all. The division in the League is temporary and made necessary by the loss of the country milk company. It is being handled by W. W. Horey, an experienced creamery manager from up-state.—H. H. Lyon, New York.

GENTLEMEN:—Thirteen room house. Seven tons of coal used this year in a 260 Andes One Pipe. Going to move into another house at present heated by furnace of another make. Going to remove present furnace and put in Andes One Pipe.—JOHN BACKUS, Livonia, N. Y.

One of 50 houses in which F. E. & F. W. Wells, of Greenfield, Mass., installed Andes One Pipes. They write, "The houses have kept very warm, even at 20 and 30 degrees below zero, besides using very little coal."

DEAR SIR:—The 260 One Pipe Andes Furnace you installed for us last October we consider a wonder. We are very much pleased in every way.—R. B. THOMPSON, Winthrop, N. Y., March 7, 1918.



PHILLIPS & CLARK STOVE COMPANY, INC, DEPT. P.,
Geneva, N. Y.
GENTLEMEN:—Please send me your free, illustrated book, Better Heating For Less Money.
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Saves Piping—Saves Fuel—Saves Health

If she could only escape the dirt and the confusion of tearing open the walls and floors of her house to put in heat pipes, many a woman would be glad enough to let her husband buy her a furnace.

And to her, the Andes One Pipe Furnace is indeed a boon, because it allows her to escape just that very thing. The Andes can be installed in your home in one day. It does not upset the house for two or three weeks, and it absolutely cuts out the cost of putting in the heat pipes.

The Andes allows you to change your complete heating system inside of twenty-four hours. Today you still use room stoves that waste fuel and require almost endless care. Tomorrow you can enjoy the Andes comfortable, healthful heat, that *saves* fuel, *saves* work and *saves* health.

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SYSTEM
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One Andes in actual use has replaced six room stoves, burns less coal than all six stoves put together, requires one-sixth of the time and work, and heats the whole house comfortably, whereas the six stoves only heated part of it.

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Back of the Andes is a reputation for *better* products, built up patiently during half a century. We could not risk injuring that reputation. Therefore we are *sure* of the Andes One Pipe. We *guarantee* it. If your Andes System One Pipe Furnace does not give you perfect satisfaction, it will be removed and its full purchase price returned.

Send for Free Book

Andes has published a free book telling the whole story of the Andes System One Pipe Furnace. If you want to know how the Andes saves piping, saves fuel, saves work, saves health, if you want to bring into your home cheerful, healthful warmth-all-over, tear out this coupon N-O-W, before you forget it, and send for the Andes book "Better Heating for Less Money". We have a copy that belongs to you.

PHILLIPS & CLARK STOVE CO., Inc.
Dept. P, GENEVA, NEW YORK
Manufacturers of the Famous Andes Stoves and Ranges

6

POULTRY

NOVEMBER POULTRY REMINDERS

Before placing clean litter in a poultry house with an earth floor remove about four inches of the contaminated soil and refill with clean sand. The earth from the house will be fine for fertilizer and the new soil will help to keep the birds healthy during the winter. Sand is much better for poultry house floors than garden soil. The soil soon becomes very dry and turns to dust and this is plastered all over the nest boxes and feed hoppers. It also makes the air unhealthful for the birds and I believe that some cases of sore eyes have been due to the unclean dust in the air where earth floors are used.

Stunted and underfed fowls do not fatten easily and the best results with poultry come by careful feeding methods every day and not by neglect followed by a race to make up for lost time. Well grown broilers can be fattened by reducing the exercise thru confinement and then feeding a cornmeal and sour milk mash and plenty of whole corn or cracked corn as a hard grain ration.

Before starting to fatten broilers it is best to study the market conditions and have an outlet for the birds as soon as they are ready. Money is lost by fattening broilers for a local dealer only to find that he is supplied for the week. Then the fattening period must be continued or the birds turned lose and it is a waste of time and money. Possibly they can be shipped to commission men at any time but it is always best to have a sure market ready so as to take out as much risk as possible. Local dealers usually like to have poultry delivered on Thursday so it can be dressed for the Sunday trade. First, make arrangements with the dealer to take a certain number of broilers on a certain date. Then begin the fattening process in plenty of time so that fine quality stock can be delivered.

Frying chickens which weigh from two to three pounds are a great delicacy if they are fat. A skinny fryer does not make the fine meal furnished by the fat juicy bird. Undoubtedly there is much waste of good poultry meat on the farms due to a lack of finishing of the broilers, fryers and roasters. It takes some time and a little corn but the corn crop is generally good this year and the poultryman who makes an effort to fatten his young stock will soon earn that they are much improved and he will not wish to serve any skinny poultry on the home table or sell it to his commission dealer or local merchant. Of course it is necessary to keep account of the feed costs to determine the profits or losses. This may seem puttery work but it pays.

There are two items in the poultry ration that are necessary but cheap. One is fresh water. The other is green feed. Have plenty of galvanized pails for use as water fountains and place them on low home-made wooden tables so they will not be filled with litter. Plan on enough green feed before the first freeze. Mangels, cabbages, sprouted oats, clover and cull vegetables help to keep the digestive organs of the hens in good condition when they are eating heavy rations to produce winter eggs.

Some poultrymen use warm water in winter and believe that it saves feed as the birds do not use the heat from their own bodies to warm the water they drink. Other breeders use cold water as it comes from the well and find the results are good. The principal point is to supply clean water and plenty of it and not compel the birds to drink ice water. It is best to empty the water pails when closing the poultry houses for the night. This saves drumming out the ice or thawing it out in the morning and also prevents the pails from springing leaks. Poultry hardware is high but the life of most metal utensils can be prolonged indefinitely if given the proper care.

Nothing stimulates the farm poultry business more than a ribbon at the poultry show even if it is only a second or third prize. It starts the poultryman on the road toward better stock and increases his interest both in egg laying types and fancy points. It advertises his birds and ofen brings hatching egg orders in the spring. It is a great help to the farm poultry business to be able to turn some of the cheap spring eggs into high priced hatching eggs and now is the time to prepare for that business.

More Openings in Front Would Improve This Building

Winter will soon arrive and the poultryman with mended roofs, clean poultry houses and well filled feed bins can reduce his worries to the minimum. Whenever possible it pays to keep a good supply of dry mash and grain on hand. It can be purchased in large quantities at the best prices. Too many farm flocks have to pay for a large part of their rations at the highest retail price. By that we mean bran and other mill feeds, oyster shells and beef scrap which are often purchased a few pounds at a time when money could be saved by placing larger orders. K.

A WOMAN'S WAY WITH HENS

Hens are a side line on the majority of farms. The average farmer keeps a flock of less than fifty layers. Our flock of 96 layers has yielded an income of $520 from the sale of eggs since January 1, 1919. These figures do not include the eggs we have used for the house or those used for hatching purposes. The feed has cost us approximately $1 per day, altho the flock has had the range of the farm at all times when the weather was favorable. We never allow them out in the range when the ground is frozen, as hens with cold feet can not produce eggs and maintain their body heat.

We feed a mash of ground wheat and gluten feed, equal parts, for their morning feed. When the weather is favorable they are fed out-of-doors. We feed wheat, buckwheat or oats in the straw for scratching feed during the day, and corn, either cracked or whole for the evening feed. All of the oyster shells, grit and fresh clean water they will consume are kept before them at all times; and skim milk when we have it. Our fowls are Brown Leghorns; and we have had excellent results with this breed.

We confine our broody birds in a prison pen and feed them liberally until they give up the broody ambition. Some of my hens are two and three years old, as I did not have many pullets to add to the flock last year. I believe that much of my success with poultry has been due to the fact that I endeavor to keep everything about the houses and range clean and sanitary at all times of the year. The only safe course to follow in combatting poultry diseases is to prevent them from gaining a foothold in the flock, and clean and sanitary surroundings will turn the trick in nearly all instances.—Mrs. Anna Burchard, Tioga Co., N. Y.

FORCE LATE-HATCHED PULLETS

Many farm flocks contain late-hatched pullets which will not lay for several months. They cannot be expected to lay soon or be as profitable as early-hatched birds. However if there are only a few of the early birds in the flock the best of the later hatches must be saved to insure egg production next year. Before the winter storms arrive much can be done to develop the late hatched pullets and start egg production sooner. The better the condition in which they enter the winter the sooner they will lay and the better they will be for breeding stock next spring.

The fall days with the abundance of green food, insects, weed seeds and fresh grain give the poultryman a chance to force the pullets and round them out as rapidly as possible. An underfed pullet is apt to be thin and when handled she seems to be all feathers. The well fed bird is rounded out and plump with a red head and glossy plumage. She is the pullet that does not mope around the range but scratches and fights and obtains her full share of the ration. Such pullets are the type that soon begin inspecting the nest boxes after they are placed in the laying houses.

A good hard corn crop is a great asset in finishing pullets for winter. They can eat a great deal of corn without becoming overfat. They need quite a little fat to prepare them for egg laying. It helps them to resist colds and other diseases during the winter when they need all their vitality to withstand the unnatural conditions that poultry have to endure in the winter even under the best possible systems of management. It pays to gather up all of the loose ears in the corn field so that none of the corn will become mouldy and decayed and then be eaten by the birds. When corn is cut with a machine quite a few ears will be knocked on the ground. After they are gathered up the pullets can be allowed in the corn field and they will not do much injury to the shocks and they will gather many bugs and bits of green food, as well as any hard corn that may have shelled out or any nubbins that are missed. We have never had birds injured by eating the corn on the ground in the field but believe it is economical and safe to gather up all the ears before any have a chance to spoil.

Soaked oats or boiled oats can be placed in pails on the range and the pullets will enjoy them. Oats seem to be a good feather growing food and they help to balance the corn in the ration. Some poultrymen who feed corn and wheat exclusively in their scratch ration use twice as much corn as wheat in the winter and twice as much wheat as corn in the summer. In the spring and fall they use equal parts of each. We have often substituted soaked oats for the wheat in the ration and found the birds to do very well both in growing and egg laying.

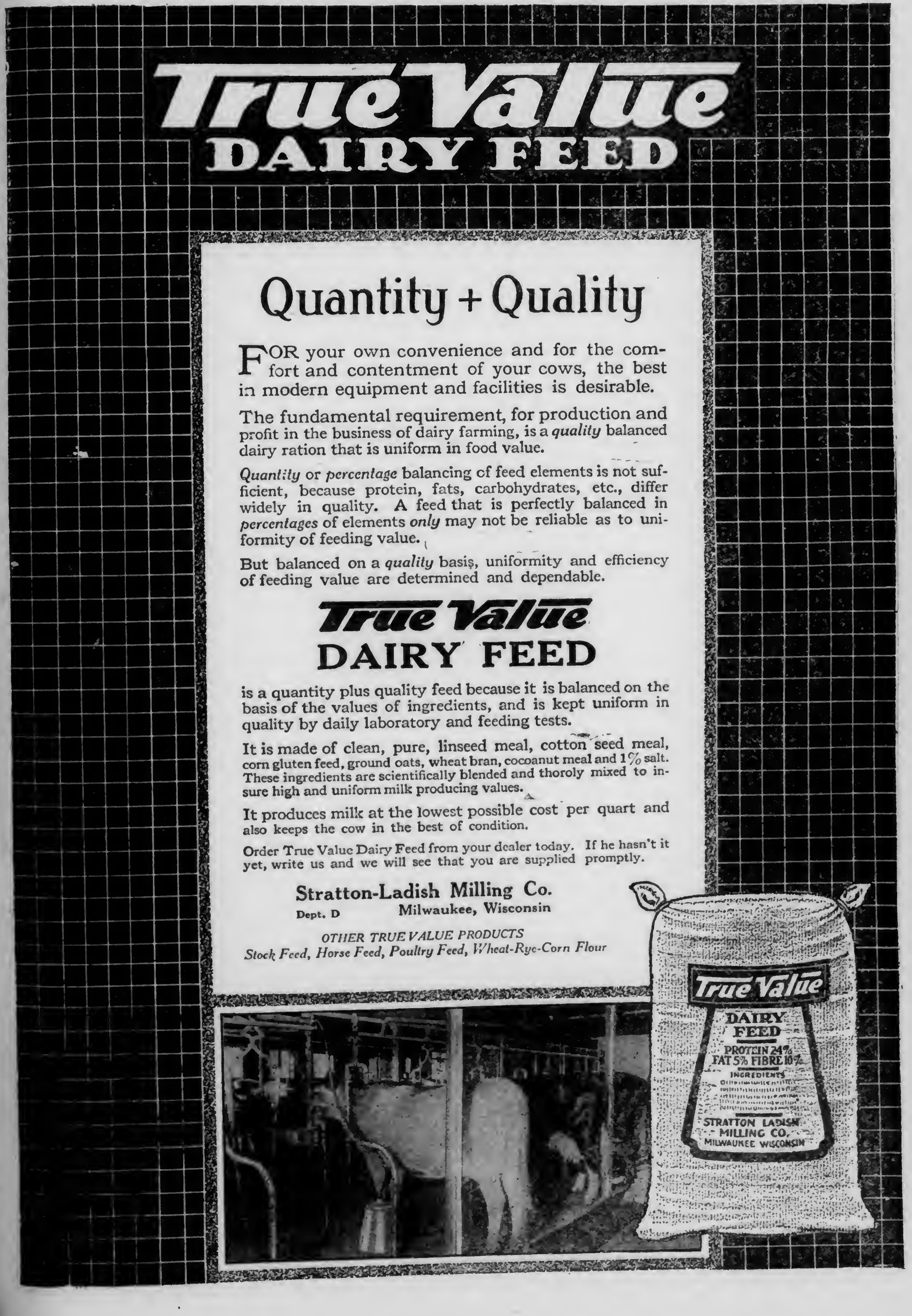
Pullets need sour milk for the best results. All they will drink is none too much and if many of them are shy and do not get much of the milk it pays to mix it with the growing mash and feed it in troughs where all of the pullets can obtain a share.

Boiled pumpkins mixed with bran help to give the pullets a large capacity crop which can handle the forced feeding for eggs when they reach the laying house. The most profitable pullets seem to be the birds that eat the most and not the dainty feeders. The aim is to start egg production as soon as possible after they have reached maturity.—R. G.

The incubator that hatches every egg hasn't been invented. Give it a better chance next year by using only normal eggs.

The farmer who has a source of reasonably cold water can cool his milk properly even though he has no ice supply.

Well Bred White Rocks



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Quantity + Quality

FOR your own convenience and for the comfort and contentment of your cows, the best in modern equipment and facilities is desirable.

The fundamental requirement, for production and profit in the business of dairy farming, is a *quality* balanced dairy ration that is uniform in food value.

Quantity or *percentage* balancing of feed elements is not sufficient, because protein, fats, carbohydrates, etc., differ widely in quality. A feed that is perfectly balanced in *percentages* of elements *only* may not be reliable as to uniformity of feeding value.

But balanced on a *quality* basis, uniformity and efficiency of feeding value are determined and dependable.

True Value
DAIRY FEED

is a quantity plus quality feed because it is balanced on the basis of the values of ingredients, and is kept uniform in quality by daily laboratory and feeding tests.

It is made of clean, pure, linseed meal, cotton seed meal, corn gluten feed, ground oats, wheat bran, cocoanut meal and 1% salt. These ingredients are scientifically blended and thoroly mixed to insure high and uniform milk producing values.

It produces milk at the lowest possible cost per quart and also keeps the cow in the best of condition.

Order True Value Dairy Feed from your dealer today. If he hasn't it yet, write us and we will see that you are supplied promptly.

Stratton-Ladish Milling Co.
Dept. D Milwaukee, Wisconsin

OTHER TRUE VALUE PRODUCTS
Stock Feed, Horse Feed, Poultry Feed, Wheat-Rye-Corn Flour

Educating Towards The Farm

By ARTHUR D. CROMWELL

Progress is being made in education as well as in other lines of human activity. We have known for some time that pupils learn and remember best when what they are trying to learn is closely associated with their home life. It is a law in psychology that "early interests condition the will," this means we like to do in later life what we became interested in during our childhood. That is the boy who is going to farm, will get most pleasure out of his life's work if he becomes interested in it during his school days.

Students of agriculture and of rural education have come to see that it is not so important to teach agriculture "to keep the boy on the farm" as it is to teach agriculture in order to make the farm a place that is attractive to the brighter boys and girls. This means somewhat of a change in the point of view in that we are not so anxious to teach agriculture in order to enable the farmer to grow more which he may have to sell at a smaller profit but we are trying to find what to grow and how to grow it so as to realize a better income that will help make the farm and farm life more attractive.

Not only is the point of view shifting closer to the farmer's point of view but the method of teaching agriculture is changing. We realize that the sciences are poorly taught and that the poor teaching comes from a faulty method. Teachers of arithmetic, give the pupils the problems and let the pupils work for the answers. Teachers and text books in science have been giving the answers.

How can we give problems instead of answers in agriculture? Certainly the farmer's life is made up of a continuous series of problems. The reason that country people are so resourceful is because they have been meeting and solving so many problems.

Some years ago we started with the boys' and girls' clubs and from them a few boys and girls gained valuable information and splendid enthusiasm. But we were not reaching enough of the boys and girls.

Not only was our method faulty while we were trying to copy after the teaching of the other sciences, not only was our aims at fault while we were trying to teach agriculture in order to "keep the boy on the farm" or to enable him to "grow two blades where one grew before, and not only were we reaching enough boys and girls in the clubs but a fourth problem loomed big as we began to teach agriculture in the small high schools. How were we to get equipment for these small high schools? Agriculture requires very costly and extensive equipment.

Farmers in the district have the equipment, thousands of dollars worth of it. How could we use it? These led to the discovery and adoption of the project problem method. and this method is the most promising thing that has come to agricultural education for a decade. Massachusetts under Mr. Stimpson was the leader in this movement but Pennsylvania, Indiana and other States adopted and in some ways improved upon the method.

What is the Project.—Problem method? This is a method of teaching agriculture so as to make it conform to life. By the project-problem method, the boy by and with the advice of both his father and his teacher selects some farm enterprise that he is to engage in during the summer vacation. He is to care for twelve hens or sixty chicks, he is to grow an acre of corn, to make part of the orchard hear better, to see how much milk he can make a certain cow or two give and at what profit, to care for the horses, garden or what not. He is not to get full credit for his school work until the next September after he has carried on his project during a summer vacation. Of course his project for each summer is to come in the subject studied, that is, an animal project is to come during the summer vacation following the year when the boy studied animal husbandry.

Just as in life, so in the project work, the moment you have a project you find many problems following. If the boy selects a dozen hens to make lay more eggs at a profit; there follow many problems. How many eggs do the hens now lay? What does it cost to keep a dozen hens as they are now kept? How may we select the hens that will be most certain to lay well? How shall we house and feed them? These and many other problems become interesting to the boy. Things that he did not care to know before, now become vitally interesting to him.

A survey made of farmers in Chester county, Pennsylvania, leads us to believe that a farmer can carry on about five different lines and make most money but if he has less or more he reduces his net or labor income. By the problem-project method, the boy who is four years in school or better as in Pennsylvania where the agricultural work begins in the seventh instead of in the ninth grade, the boy has five or six summer vacations and hence can try his hand at five or six different lines. At the same time he is associating with other boys who are trying other enterprises and hence when the boy becomes a man he has made a study of what are the most profitable five enterprises for his locality. He may find dairy, pigs, hay, poultry and potatoes; or he may find fruit, poultry, potatoes, bees and gardening; he may find grain (wheat or seed corn) hay, pigs, poultry and dairy cows; or any other combination. He may find that one or two lines are to drop to a decidedly secondary place and one line, as dairying, is to become a decided leader. But in any event he has head in the game and instead of looking how to grow more at a possible loss, he is spending the years of his youth searching for what he may produce at a profit.

By the problem-project method, we think that the boy learns what is most worth learning, he takes more interest, he works under the supervision of the father and the teacher and hence he is able to profit by more experience than he has had, he takes renewed interest in the home place, he has a chance to try new ways, he furnishes to the school valuable equipment by making all of the farm and farm methods material for study and if the agriculture is correctly taught, he gains a wide view of farming.

Such problems as: Where are hens, dairy cows or orchards made to pay most? Where in the United States? Where in other countries? How are they cared for? Such problems lead to an interest in geography and history. They give a wide view and they lead to an interest in agriculture in other places. Many interesting problems in arithmetic are corrected with the school work in the project method and many records and reports may be neatly and accurately written and thus the pupil reviews arithmetic and grammar.

FARMER JOHN'S ADVICE

Said old farmer John to his faithful wife, Sue,
"You must economize in all that you do.
You're very wasteful, as I've often said,
You work with your hands, but not with your head;
Jes' figger things out and pinch all the time,
In that way you'll save us many a dime.

One caliker dress ought to last you a year,
Fer cotton is up,—going higher I fear;
And as fer a bunnet, no need to buy new;
Jest wear your last year's one—it surely will do.
Women have no need to fuss sech a lot
Over bunnits and sich when the weather is hot.

Too much money is wasted; jest flung right away,
Over women's fool fixin's to make 'em look gay,
With dresses too short at the bottom an' top,
A walkin' on stilts, with a hitch an' a hop—
Shaller brained critters the most of the sect,—
You never can tell what they're goin' to do next.

In the matter of cookin', of course, have enough,
Fer men folks work hard; 'would be pretty tough
To pinch at the table; but try to cook sparin',
An' bile your potatoes without any parin'.
Don't fail on the pie, fer a man's got to eat,
And a dinner without it ain't much of a treat.

But it's jest simply awful, the sugar you buy;
I know you could manage with less if you try.
An' the eggs an' the butter, you ought to sell those
To furnish the table and buy all the clothes,
A good manager could; but then, ez I've said,
You have to use judgment and figger ahead.

What's that you are sayin'? tobacco is high?
That's jest like a woman, argue 'er die.
You would take from a man all his comfort in life,
When he's slaved all his days in the heat of the strife.
I guess I'll be goin'. You'd have the last word
If Gabriel's horn in the heavens was heard.

WHITHER ARE WE DRIFTING?

I have been wondering very seriously who will be the farmers of the future? The majority of young people are leaving the country; they do not like the farm. This seems especially true with the girls. Now if the girls leave the country what will become of the boys. I am a young man and the fear of becoming an old bachelor continually haunts me, but I couldn't give up the farm for love nor money. I love the sheep and chickens.

My greatest ambition in life will never be realized so long as I am unmarried. I sometimes think of advertising for a wife just to see how many girls really would answer and then I am not sure that the girls who would answer would make good wives and agreeable companions for a plain young hayseed. I was talking to a young lady a few days ago. Our conversation drifted to rural life and she must have thought that I meant business for she told me that she didn't want to live in the country. She thought it would be too lonesome.

One of my young farmer friends who gave promise of becoming a successful farmer had a wife who got the "Metropolitan Bug," which, if not relieved, is usually as fatal as the "flu bug" so they moved. There are many such cases in this community. Now, what shall I do? Shall I follow the occupation for which I am fitted and would be interested and contented and that by my nature is my calling, or shall I pack up my assets and move to the city? Shall I let my passion for love and companionship of some dear, beautiful girl rule my better judgement

and give up the farm and let her lead me to the city and discontent, and very likely ruin? Shall I learn a new trade and trust to Providence for success in a new field? What is wrong with the girls nowadays anyhow? What do they see about the city? Will some of the young ladies answer this for me and other young men who love the farm and still have a passion for love and companionship?

You say the farm is lonely but how can one become lonesome on a good farm. My mother's chickens get so friendly that they eat out of her hands and fly upon her shoulder. Our cats come to the door and mew until we give them their food. The kittens play on the porch and furnish amusement by the hour. Even the old cow knows mother. Next you say too much hard work. It is not so. Our mothers and grandmothers knew what hard work was, but our young ladies never will. When mother was young she could ride horseback or walk to town, now we ride in an auto. Then the women had dirty oil-lamps to clean and fill with coal oil. Now we have electric lights and washing-machines, irons and sweepers which can be had by any industrious young couple. We can have water by turning the spigot. These things will soon be in every country home and the old drudgery will come to an end. Again, I want to ask where our future farmers will come from if our country girls are not ambitious enough to strive and make their farm home a paradise. I surely can't see a very bright future for farmers if the girls all leave the country. — Bachelor, Westmoreland Co., Pa.

Will some of our young lady readers please explain?—Editors.

"WHERE ARE YOU GOING MY PRETTY MAID?"

O. where are you going my pretty maid?
Down to the store, kind sir, she said.
What are you after, my pretty maid?
I am after some oleo, sir, she said.

We have fifty good milking cows out in the barn,
But dad says for butter he don't give a darn;
And he will eat oleo now till he busts,
For by doing this he is helping the Trusts.

The Trusts are using dad splendid indeed
With three dollar milk and four dollar feed.
For my part I've never contrived to see how
An oleo eater could face a good cow.

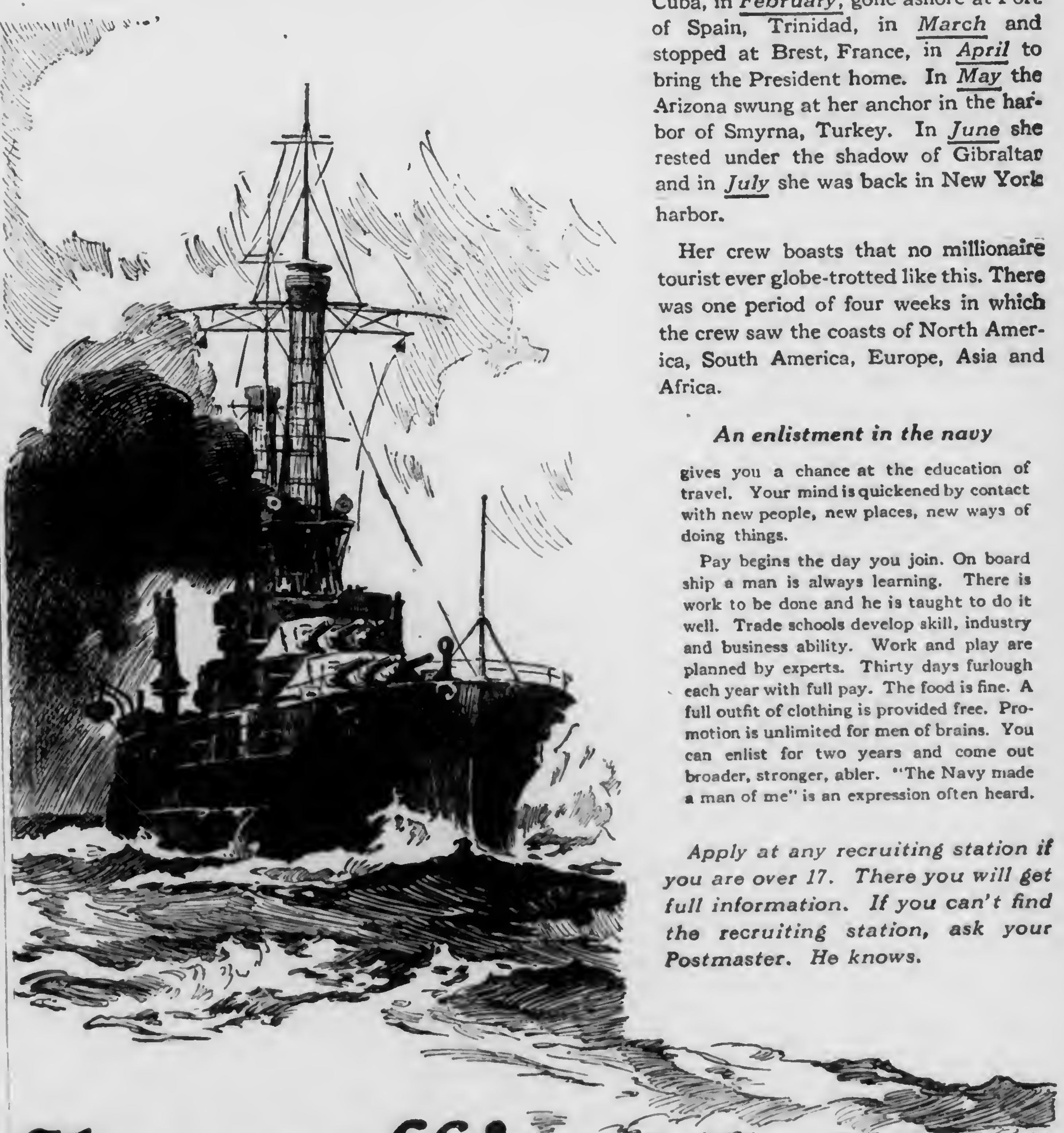
We kick on the Trusts and we rant and we roar,
But still in their coffers our money we pour.
They take every cent that we're able to earn,
Because we're too dod gasted lazy to churn.

But we hope thru the work of the Dairymen's League
From Oleo's bondage soon to be freed.
And see home-made butter on Dairymen's table.
So boost for good butter whenever you're able.

—Erie Co. Bureau News.

In mentioning the workers of the world the American hen should not be forgotten. One estimate places her yearly product at 2,625,000 short tons.

If you had been on the Arizona



HERE she comes, homeward bound, with "a bone in her teeth," and a record for looking into many strange ports in six short months.

If you had been one of her proud sailors you would have left New York City in *January,* been at Guantanamo, Cuba, in *February,* gone ashore at Port of Spain, Trinidad, in *March* and stopped at Brest, France, in *April* to bring the President home. In *May* the Arizona swung at her anchor in the harbor of Smyrna, Turkey. In *June* she rested under the shadow of Gibraltar and in *July* she was back in New York harbor.

Her crew boasts that no millionaire tourist ever globe-trotted like this. There was one period of four weeks in which the crew saw the coasts of North America, South America, Europe, Asia and Africa.

An enlistment in the navy

gives you a chance at the education of travel. Your mind is quickened by contact with new people, new places, new ways of doing things.

Pay begins the day you join. On board ship a man is always learning. There is work to be done and he is taught to do it well. Trade schools develop skill, industry and business ability. Work and play are planned by experts. Thirty days furlough each year with full pay. The food is fine. A full outfit of clothing is provided free. Promotion is unlimited for men of brains. You can enlist for two years and come out broader, stronger, abler. "The Navy made a man of me" is an expression often heard.

Apply at any recruiting station if you are over 17. There you will get full information. If you can't find the recruiting station, ask your Postmaster. He knows.

Shove off! Join the U. S. Navy

School Box Outfit

This School box outfit is of imitation leather, is durably made, has single clasp and contains nine articles including a sanitary drinking cup, 10-inch rule, pencils, penholder, rubber eraser, pencil sharpener, etc. The contents are selected from well-known lines and are of the best. Sent to your address, all charges prepaid, for 2 subscriptions to Pennsylvania Farmer for the balance of this year and all of next to January 1, 1921, at 75 cents each.

PENNSYLVANIA FARMER, 261 South Third Street, Phila., Pa.

What About the School Lunch?

How to Make it do Better Work

While we are sending our vast army of boys and girls to school to develop and train their minds, we must not forget that it is equally important to take care of their bodies. A person with a well trained mind is handicapped all his life in what he might accomplish if he does not have a good strong body.

One of the most important factors in making a strong body is the right food during the growing years of childhood.

For the mothers of the children who have to carry their lunches there is a special problem in providing the necessary wholesome foods and in varying the lunch so that the appetite of the child will not be dulled. Children who have to eat a cold lunch every day are very apt to lose their appetites, and to develop an abnormal craving for certain foods such as sweets and sour things.

Just as the child's mind develops gradually and he passes from one grade to the next as he masters the work in each grade, so a child's body develops gradually. We do not expect a child to understand algebra. Neither should we expect a child to eat as much nor as hearty food as a man does. The amount and kind of food should be chosen to meet the physical development of the child.

For growing boys and girls the best foods are generous amounts of milk and butter, eggs, well-cooked cereals, fruits and vegetables. These foods supply body building and repair material for the growing bodies, energy to work and play, and material to regulate the machinery of the body and build up resistive power.

The basis of any lunch is the sandwich. The essentials of a good sandare: Bread at least one day old rather than freshly baked, with slices cut thin, and both slices spread with butter so that the filling will not soak into the bread.

Children need but little meat, so only occasionally should meat be used for sandwiches. Of meats, chicken and lamb and mutton are best for children. A small amount of meat may sometimes be combined with other materials for sandwich filling. Fish may be used more liberally than other meat.

The following suggestions for fillings will help mothers to make up sandwiches that the children will like:

MEAT

- Minced ham with cream or salad dressing.
- Left-over meat minced with cream or salad dressing.
- Dried beef, plain or frizzled.
- Thin slices of beef, ham, chicken or lamb, sprinkled with salt or spread with a little salad dressing.
- Sliced broiled bacon.

FISH

- Tuna fish or salmon, plain or mixed with salad dressing.
- Sardines minced, with lemon juice added.

EGGS

- Hard cooked, chopped and mixed with salad dressing.
- Scrambled, plain or in milk, or with bits of chopped bacon.

CHEESE

- Cream cheese with chopped nuts, olives or peppers, or a combination of these. Hickorynuts, walnuts or butternuts may be used.
- Sliced cheese spread with cream or salad dressing, and used with rye bread.
- Cottage cheese with onions and cream or salad dressing, and used with brown bread. Pimento peppers may also be added.

The Electric Iron Is Available Where a Home Electric Plant is Installed.

FRUIT

- Dates, figs, raisins, ground and mixed with nuts, then a little lemon juice mixed in.
- Jams and jellies.
- Ripe bananas mixed with peanuts or peanut butter.

VEGETABLES

- Plain lettuce with salad dressing.
- Sliced tomato with salad dressing, or lettuce or tomato.
- A small amount of diced pickled cucumber with cottage cheese.
- Pickled beets with cottage cheese.
- Baked beans with French or cooked dressing.

The Rest of the Lunch

In addition to the sandwiches there should be some fruit, fresh, canned or stewed dried, such as apples, (raw, made into sauce, baked or prepared in other ways,) prunes apricots, oranges, or bananas (these should be either very ripe or else cooked.)

Fresh juicy fruit should be used instead of pickle relishes, which are not good for boys and girls except as given occasionally in small amounts in the salad dressing to given relish to the bread. A small screw-top glass jar may be used to carry the cooked fruit.

Also a dessert of the right kind should be put in. Baked custards, varied in flavors to give variety, are usually popular; also cereal puddings, such as baked rice pudding or fruit puddings, cocoanut Indian meal souffle, and the like.

Cake may be used with fruit. Of cakes, sponge cake or those made with a small amount of butter are better for young digestions. Sugar cookies, hermits and the like may be put in sometimes.

A few figs, raisins or dates used as dessert will be relished by the childen, and these things are quite nourishing, as well as a source of promoting good intestinal action. Since they are very rich in sugar, they should not be put in very largely when cake or other sweets are present in liberal amount. Candy also may take the place of a dessert, sometimes. Children should learn to eat candy only at the end of a meal, for the reason that it is very quickly used in the body. If taken before or between meals, it satisfies the appetite, then at meal time the child does not eat the eggs, milk, cereals, fruits and vegetables which he should have.

In season fresh tomatoes may take the place of fruit.

Children should always have fresh whole milk to drink with their lunch. Some sort of bottle or other container can be povided in which to carry the milk. The importance of milk in the growing child's diet every day can not be emphasized to strongly. Every growing boy and girl should have at least a quart of milk a day, distributed in milk to drink, custards, cream soups or other dishes.—Pearl MacDonald, Penna. State College Extension Service.

GOOD ONE-EGG CAKE

The following recipe was given me several years ago as recipe for loaf cake, but I have found it suited to various other uses. For instances, baked in layer pans it makes a good layer cake of ordinary size. And sometimes I add a cup of cocoanut, a heaping teaspoon of cocoa, or a cup of chopped raisins, and drop by spoonfuls on buttered pans, and get delicious drop cookies.

One cup sugar, 1 heaping tablespoon butter, 1 egg, 1 cup sweet milk, 2 teaspoons baking powder, 2 cups flour, and seasoning as desired.

When I have a cup of cream, either sweet or sour, I use it instead of the milk, and leave out half of the butter. When I use sour cream, I leave out the baking powder, and instead use 1 rounded teaspoon soda. —Mrs. P. W. Lawton, Tioga Co., Pa.

TRAINING LITTLE CITIZENS

Early Art Training in the Home For Our Children

By WALTER GILMAN PAGE

Art has been called the handmaiden of religion, so why should we not bring into child life all the riches which art has to offer? Every parent knows the child's interest in all things pictorial. If a father can draw, even crudely, some common object of our daily life, he will have plenty of opportunity to exercise whatever talent he may posses along this line.

All children love to draw and paint, it is an instinctive form of self-expression and not enough attention is given to the appeal which art makes to little people.

No one of us forgets the pictures which hung on the walls of our father's home, and no one can calculate the influence which such pictures have exercised over us. Let us place before our children the lovely reproductions of the great masters, which we may now obtain at small cost and many of which are so child-like as to appeal immediately to all children.

In these times it is not difficult to use the pictorial, for many magazines and newspapers contain some good pictures. Every child's thoughts and ideals should be formed on what is beautiful and worth while in art, music and literature.

While a certain amount of attention is given to the value of pictorial art in the schools, the parent can supplement this by commencing to collect from the newspapers and magazines much that would appeal to the child, and, with the aid of a scrapbook, considerable general information can be instilled with little effort.

A child never tires of a story and every picture has in itself the germ of one. The child's interest is easily aroused, and he absorbs far more than we realize. Long before the time arrives for reading, writing and arithmetic, he may acquire a liberal education thru pictures and the stories which Daddy has woven about them.

Much enjoyment of the great works we see in our art museums is taken from us because we are unable to appreciate art, for the reason that in our earliest and most impressionable years no attention was given to our natural interest in the pictured world, and one cannot plunge into the atmosphere of real art at a bound.

Why do parents exhibit with pride little John's first crude attempt at picture-making and let it go at that?

It should be a guide post for their own attitude oward the child and lead them to cultivate this perfectly natural form of expression. Every parent is able to open up a new world to his child by careful and judicious use of the material which comes easiest to his hand.

The following list of books may be helpful to parents: Teaching Children How to Draw," by Walter Sargent; "Fine and Industrial Arts," by Walter Sargent; "First Step in the Enjoyment of Pictures," by Maude I. G. Oliver (published by Henry Holt & co.); "Play Life in the First Eight Years," by Lucila Palmer.

Adhesive plaster is one of the best household menders, especially for all sorts of rubbers. A housewife who keeps it handy says it has as wide a range of uses as the versatile hairpin.

Fore Thots and After-Thots in Building

Our house had an addition built onto the upright, which we always called "the after-thot" because it was so poorly joined. The new part was plastered over one chamber window and always leaked at the joining. It contained the kitchen, wood house, etc.; but was very inconvenient in that we lived in the end of the house farthest from the drive way and people could drive in when we were all in the house and fail entirely to find anyone. In the opposite end was a long room 17½ by 9, used as a bedroom, but connected with the cellar by an unfinished closet which made it very damp. We had that closet lined up with wall board and built into a dish cupboard, cut an outside door beside it, moved in the cook stove, and presto! We had a very satisfactory kitchen commanding a view of the driveway and four public roads, and the dampness had entirely vanished. The large room between this and the old kitchen became a combined dining room and living room. The front door had formely been little used because it was inconvenient to open and inaccessible from the outside, but we added a veranda 8x16 feet and, with a new door and good veranda steps, it became one of the handiest parts of the house. The north end of the house had formerly had no exit but a door was cut in the north room (in ye olden time known as the parlor) and a veranda about 6x12 built across this end. Of course the house is more than 12 feet wide but the veranda covers the new door and two windows. Before we got any more remodelling done my mother was taken sick and it is still unfinished but we are hoping that she will be better next year and the next move will be the removal of the deserted old kitchen and water piped into the new one. Eventually the pantry, which opened off the old kitchen and is too far removed from the new one to be useful as such, will become a bathroom and the present kitchen will be widened into a dining room and a new kitchen added beyond. The cost, thus far, has been under $200, more of which has gone for carpenter work than for materials. It seems now as if I couldn't do without my verandas, I really wonder how I used to get along without them. At present we are a little "cluttered" during the transition period but a few partitions upstairs will greatly relieve the situation and I hope soon to have a greatly improved farm home.—Mrs. E. M. Anderson.

NATURE VS. THE BOTTLE

Egg Harbor is a community of large families. A young woman who brought her children to be weighed at the recent Department of Health's Child Hygiene Exhibit in New Jersey stated that she is the eldest of a family of 18, the youngest of whom is two weeks' old. The mother is forty-five and was married at twenty-one.

"In my community," she declared, "bottles are not fashionable—and this may well apply to the whole of Atlantic County. Babies are mostly breast fed and this, together with the mild climate, accounts for the low child mortality of this section of New Jersey."

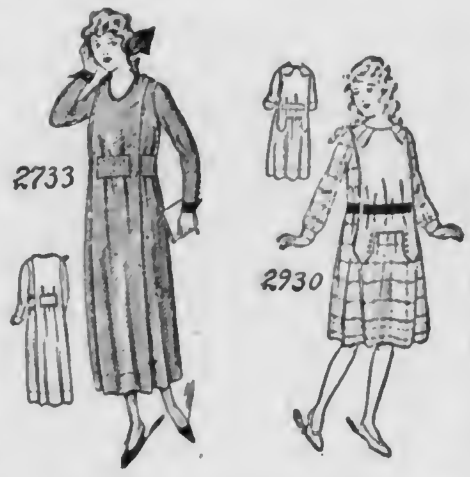
The chief cause of death among babies is mal-nutrition. Cow's milk is for the calf, and mother's milk for the baby. Twenty-seven bottle-fed babies become sick to one that is breast fed. The mortality of breastfed babies is less than 4 percent against 11 percent under the most scientific artificial feeding, and 30 to 40 percent where science is lacking.

In planning or rearranging the kitchen remember that expending a little nore thought and money may mean that the drudgery of housework will be lessened for years to come.

PENNSYLVANIA FARMER PATTERNS

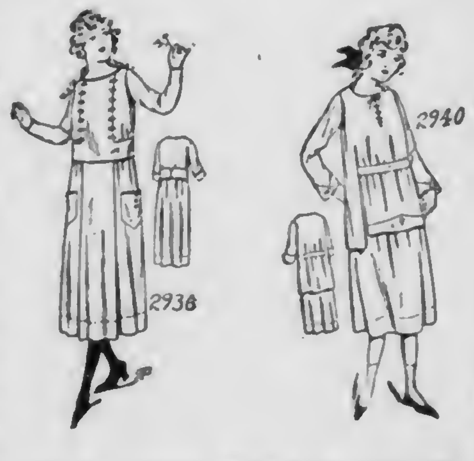
Give figures and letters of each pattern exactly as printed at beginning of each description or we will not be responsible for correct filling of orders. Give bust measure when ordering waist patterns, waist measure for skirt, and age for children's patterns. Address Pennsylvania Farmer, 261 S. Third Street, Philadelphia, Pa.

2733.—This simple model is easy to develop, and is becoming to slender figures. The back and front are plaited, and the closing is effected at the left side of the front at shoulder and under the plait. The pattern is cut in 3 sizes: 16, 18 and 20 years. Size 16 will require 3⅞ yards of 44-inch material. Serge, corduroy, jersey cloth or gabardine could be used. The dress measures about 2 yards at the foot.—Pattern costs 10 cents.



2930.—Plaid suiting and plain serge in a matched color were used for this style. It is also nice for sege with taffeta and for all wash fabrics. The pattern is cut in 4 sizes: 8, 10, 12 and 14 years. Size 12 will require 3⅝ yards of 44-inch material for the dress, and one yard for the plastron. Pattern costs 10 cents.

2936.—Here is a very attractive model that will develop well in serge, or gabardine, and is also nice for combinations of plaid or checked and plain fabrics. The pattern is cut in 3 sizes: 12, 14 and 16 years. Size 14 requires 4½ yards of 27-inch material. Pattern, 10 cents.



2940.—Serge, gabardine, corduroy, voile, or all wash fabrics are good for this style. The blouse is, made to slip over the head. The skirt is a two-piece model. This patern is cut in 4 sizes: 8, 10, 12 and 14 years. Size 10 will require 4¼ yards of 30-inch material. Pattern, 10 cents.

"There's the real Liberty Motor"

"The power that liberates me from all the fatiguing work of washday. From dependence upon unreliable hired help. From the whims or necessities of the men folks, who always seem to need the farm power plant for something else when washday comes around.

"This Multi-Motor washer has its own independent power plant, a little easily operated gasoline engine built in under the tub, as a part of the washer.

"I *can* belt the washer up to the cream separator, churn or other light machinery and save hand labor in a dozen different ways outside of washing. I even loan it to the men, in a pinch, for shelling corn."

With its swinging, reversible wringer, also operated by the engine, this washer is the one machine that places the farm home on a par with the power operated farm. It does for the home what the truck and tractor does for the farm.

Write for the Maytag Household Manual, telling all about this wonderful machine and containing many helpful suggestions in home management. Sent gratis.

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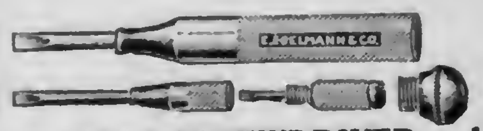

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PENNSYLVANIA FARMER, Phila., Pa.

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SELECT the house or other building that pleases you; take it to your home lumber dealer, and he will show you detail blue prints and working plans for it, with an accurate estimate of material required and its cost for erecting the structure *complete.* When you build, you are given the use of the working plans.

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CLOVER AND GRASS SITUATION

Red clover seed is sure to be scarce and high before it is time for seeding next spring. Reports from some sections are discouraging so far as this year's crop of seed is concerned, and there are well-posted seed authorities who predict that it will sell for thirty-five dollars per bushel before next March. It is rather venturesome for one to attempt to predict future prices of any farm crop, but those who need seed should lose no time in securing an adequate supply of good clover seed as quickly as possible.

Every farmer should make a careful study of the present situation and plan his actions accordingly. The prices of alsike and timothy are likely to follow the lead of clover seed and go skyrocketting before seeding time. The following report of the 1919 red clover, alsike and timothy seed crops should prove of interest to many farmers who plan on seeding these crops next spring. It is based on conditions October 1, 1919.

Medium Red Clover.—(East Central Division). — Reports received September 30 indicate that about 25 percent of the 1919 crop of medium red clover seed has left the hands of growers. The quality of this year's crop is about equal to that of last year.

(North Central Division).—The hulling of medium red clover seed has just begun, and only 15 percent of the crop has been disposed of by growers. The early reports of a good yield per acre in Minnesota have been confirmed. The quality of the crop is better than that of last year.

Alsike Clover. — (East Central Division).—Sixty-six percent of the alsike clover seed has left the hands of growers. The quality of this season's crop is equal to last year's and nearly equal to normal. Some reports indicate that an increased acreage will be saved for seed next year.

(North Central Division). — In some sections the hulling of alsike clover seed has been delayed awaiting the hulling of red clover seed. Only 40 percent of this year's crop has been disposed of by growers. The quality is estimated to be about 25 percent better than that of last year.

Timothy.—About 80 percent of the Iowa timothy seed crop and 70 percent of the Missouri crop had moved from growers by the end of September. Of this movement, about 25 to 30 percent had taken place between August 22 and September 27, during which time prices paid to growers at country points declined about 60 cents per 100 pounds of clean seed.

No material changes from the August reports were noted in the September reports relative to the quality of this season's crop of timothy. There were localities, as there always are, where some of the seed was badly hulled or stained by rains but the quality of the 1919 crop taken as a whole was equal to normal and somewhat better than that of last year.

EUROPEAN FARMERS INCREASING PRODUCTION

Crop prospects in Europe are much more encouraging than previous reports have indicated. So far as its production for bread grains is concerned Bulgaria is practically on a pre-war basis and Hungary almost so, but Roumania is still far from complete recovery. The most optimistic claims of Roumania for export this year are 500,000 tons as against 1,700,000 tons of pre-war years. In the wheat-producing region of southern Hungary the average planted this year is fully 90 percent of the normal pre-war acreage. In that part of Roumania occupied by the armies of the Central Powers, considerable land was not cultivated this year, while that which was devoted to crops was found in rather poor condition. This came about because the Teutonic armies ravaged the country of much of the work stock and agricultural implements. However, despite this Roumania will be more than self-supporting.

FIGURES ON SHEEP

Figures for June, July and August which are now available show that during these months 12,647 sheep and lambs for feeding purposes were shipped into New York State from the various stockyards of the country. A third of these were loaded at Buffalo, the rest were shipped directly from Chicago, Omaha and Oklahoma City. There were also more than 5,000 head of cattle for feeding purposes shipped to the farms of this state, two-thirds of these being loaded at Buffalo and the others from further west.

NEW YORK STATE CROP

As a result of the generally warm weather and good growing condition that prevailed in this state during September the yields of corn, beans, buckwheat, potatoes, apples and pears will all be larger than was expected a month ago. According to the U. S. Bureau of Crop Estimates only a few localities were frosted befor September 27th and most of the state escaped damage till October 8 by which time practically all corn and buckwheat had been cut.

The corn crop is so much better than ever before that there is no basis for comparison, but from the reported condition of the crop on October 1 a yield of 44½ bushels per acre is indicated. The highest average yield of corn ever previously recorded in this state was 41 bushels in 1914. Compared with last year, however, the increase in corn will go only half way to make up for the great reduction in oats.

Buckwheat is now expected to average nearly 23 bushels per acre, a yield not often equaled, and the crop of beans will probably be the best in 5 years, with an average yield close to 14 bushels per acre.

Tomatoes have also been a good crop in this state this year. Canning factories report the average yield as ove 7 tons per acre compared with 6⅔ tons last year. Along the Atlantic Coast, however, the crop was damaged by too much rain and the total quantity of tomatoes canned in the United States will be only about half as great as last year.

Cabbage has been a disappointment to the growers this year. So many fields have been almost completely ruined by aphis that the average yield will be only about 5½ tons per acre, or fully 2 tons less than usual. Both in this state and in the country as a whole the acreage harvested is nearly ⅕ less than last year. Considering the short crop the price is not as high as many growers think it ought to be. One explanation of this is that so large an amount of sauer kraut made last year is still on hand that this year hardly a quarter as much cabbage as usual will be cut for kraut.

PASSING EVENTS IN PICTURES

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1.—The Barnard Statue of Lincoln, Lately Unveiled in London.

2.—A German Gun Captured by Our Boys, Now on Boston Common.

3.—Admiral Wm. S. Benson, Chief of Naval Operations.

4.—Typical Family of a Chicago Steel Striker.

5.—Cardinal Mercier of Belgium Laying Hand on the Liberty Bell.

6.—Baron E de Cartier de Marchienne, Belgian Ambassador, and Wife.

7.—Squash and Other Products as Grown in Massachusetts, and shown at the Boston Fair.

8.—William Z. Foster, Organizer of Steel Strike, and "Mother Jones"—Prominent in Labor Organizations.

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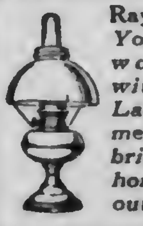

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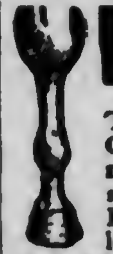

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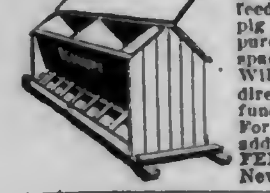

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LIVE STOCK

STOMACH WORMS IN SHEEP

"The stomach worm need not be a serious trouble for a good shepherd who has his lambs come early, feeds well, drenches the flock as a measure of prevention and provides a rotation of pastures or pasture crops." That is the judgment of the United States Department of Agriculture on one of the most serious problems for owners of farm sheep.

How can one tell when sheep have stomach worms?

Dullness and lack of thrift are among the first indications. Scouring is often noticeable. These conditions might result from other causes, but when due to stomach worms, are accompanied by a pale, bloodless appearance of the skin and the mucous membrances of eyes and mouth. Sometimes there is a watery swelling under the jaws.

How do the worms injure sheep?

These very small worms live in the alimentary tract, principally in the "fourth stomach," and injure sheep by consuming blood, and by secreting a poisonous fluid which destroys red blood corpuscles. The injury is often fatal to lambs. Adult sheep are better able to withstand it.

How should infested sheep or lambs be treated?

Make a drench by dissolving one-fourth pound of powdered bluestone in a pint of boiling water, and add sufficient cold water to make a total of 3 gallons of solution. The dose for an adult sheep is 3½ fluid ounces, for lambs under a year old, 1¾ fluid ounces of this solution. It is better to use this early before serious trouble develops than to wait until the lambs begin to die.

Care, however, is necessary in drenching, and improper dosing may cause serious damage. While the lambs are with the ewes, change pasture every two weeks if possible and do not return the flock to the old pastures until the lambs are sold.

How do sheep become infested by stomach worms?

The stomach worm lays its eggs in the stomach of the sheep. They are passed out with the feces and hatch on the ground. In the last larval or infectious stage, the young worms climb up on grass blades and are taken into the stomach of the sheep and lambs with their food. They will live for a long time in the pasture. For all practical purposes it may be considered that a pasture will not remain infested longer than a year, in the absence of sheep or other ruminants Another way of freeing a pasture of its infection is to plow it up. It is not of much consequence whether every larval stomach worm in the pasture is dead or not. The object is to keep the number so reduced that they are not likely to prove injurious to sheep.

What methods can be employed to prevent loss from stomach worms?

Prevention when it is possible to take the necessary precautions is more satisfactory and economical than treatment. The most effective measures of prevention are:

Have the lambs dropped early, and feed to develop them as much as possible before they go on pasture. Rotate pastures. Where feasible, plow up infested land and put it in forage crops that will make good grazing for sheep. Where sufficient changes of pasture can not be provided, drench with bluestone as a preventive and curative measure. Many successful shepherds dose all the ewes before turning them on pastures with the lambs, and after weaning time, dose all the lambs that are to be kept. This is done as a means of keeping infection of the lambs down to a minimum.

Champion Shropshire Ram. A Winner at Trenton Fair

FLASHES FROM THE TRENTON FAIR

Unfavorable weather during the three important days failed to prevent the Trenton Inter-State Fair from staging a very successful live stock show. The entries were more numerous than in former years, particularly in the sheep and swine departments. For the first time in years all the available space in the sheep and swine barns was filled. The members of the boys' pig clubs found it necessary to house their prize pigs in horse barns.

The horse show was featured by the world's champion six horse hitch of Clydesdales, owned and exhibited by the Morris Packing Company of Chicago. On Friday all prize-winning horses and cattle were paraded on the track in front of the grand stand which added greatly to the afternoon program. This display proved of wonderful interest to those in the grand stand.

The Percheron exhibit brought out some individuals of exceptional type. The Clydesdales were hardly up to par this year.

Some very well conditioned specimens of the different breeds of sheep were on exhibition, altho some exhibits failed to arrive.

Six breeds of swine attracted the eyes of visitors. The Berkshires were in the lead, altho some of the other breeds presented very credible exhibits. Altogether the swine show proved very successful.

THE RACE BREEDS AS CAVALRY MOUNTS

Strictly speaking, thorobred and standard-bred horses have been bred for one particular thing, and that is for racing purposes. The one thing most desired is speed. We have several exponents of the thorobred horse as the only typical cavalry horse. Personally, we cannot understand why the thorobred horse is the only type that would make a good cavalry horse, for the reason he is bred with but the thought of speed. He is often small and very finely developed, a very sensitive nervous animal, and should carry not more than 100 pounds as a rule, while a cavalry horse must carry from 225 to 275 pounds. They are worked on the best of footing while the cavalry horse is often called on to run over the worst that can be found. What a great number of thorobreds we see that have very poor legs after they have raced for some time, altho they have the best of care. Their trotting gait is stiff and stilty, and altogether unsuited for riding purposes. Army life is the farthest extreme that we could think of from the life the thorobred is bred for. Much the same can be said of the standard-bred or trotting bred horse, in which breeders have sacrificed size and conformation for speed. We are personally familiar with a great number of them that have gone lame at some time if they are trained or raced. Their stride, as a rule, is much too long to make a comfortable riding gait.

How the State and Government Could Help

The horse, as we all know, is one of the most important cogs in our agricultural machinery, and what has just passed has shown the state and federal government just what class of animals we have in the United States. We think that it would be wise and judicious for the state and federal governments to enact legislation to encourage the perfecting and up-building of the breeds of horses that we have. Give prizes to encourage improvement. Make it possible to have shows so that competition and friendly rivalry may be stirred up among producers of horses, that they may bring about a very marked improvement in their animals. We can never hope to have a class of horses that will make good cavalry mounts until we can educate our breeders into the necessity of breeding for uniformity of type, size, conformation and utility rather than for speed.—Lieut. Geo. H. Conn, V. C., U. S. A.

Some chicken remedies, of course, may remedy, but the poultryman who gives his poultry good care, clean water and proper feed will have little need for them.

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Start your cows on Happy Cow Feed at once and you will then realize why we are so much in favor of an honest feed law which protects you and feed manufacturers who are doing business on the level.

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KEZIAH COFFIN

By JOSEPH C. LINCOLN

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SYNOPSIS

Keziah Coffin, a good-natured widow, is packing up to leave the fishing village to go to Boston, her brother having died and left her alone. Grace Von Horne, ward of Eben Hammond and young friend of Keziah, is assisting her. They are discussing the coming of the new minister for the "Regular" Church, to which denomination Keziah belongs. Grace is a member of the "Come-Outers," a rival set. Between the two a jealous rivalry exists. Eben Hammond calls and induces Keziah to become housekeeper for the new and single minister. She accepts and Grace goes with her to prepare the house for his coming. The new minister arrives and he and Keziah become friends at once. Keziah proceeds to make him acquainted with local conditions—especially the strained relations between the two sects. Mrs. Coffin advises him that if he wishes to steer an easy course he must recognize the "classes" of the community, and also not to fraternize with the "Come-Outers." In spite of the warning he visits the "Come-Outer" meeting one evening, is recognized and is preached at and prayed for.

I had heard, too, that there seemed to be a feeling of antagonism, almost hatred, against me among you here. I couldn't see why. Most of you have, I believe, been at one time members of the church where I preach. I wished to find out for myself how much of truth there was in the stories I had heard and to see if a better feeling between the two societies might not be brought about. Those were my reasons for coming here tonight. As for my being a false prophet and a worker of iniquity"—he smiled—"well, there is another verse of Scripture I would call to your attention: 'Judge not, that ye be not judged.' "

He sat down. There was silence for a moment and then a buzz of whispering. Captain Eben, who had heard him with a face of iron hardness, rapped the table.

"We will sing in closin' " he said, "the forty-second hymn. After which the benediction will be pronounced."

The Regular minister left the Come-Outers' meeting with the unpleasant conviction that he had blundered badly. His visit, instead of tending toward better understanding and more cordial relationship, had been regarded as an intrusion. He had been provoked into a public justification, and now he was quite sure that he would have been more politic to remain silent. He realized that the evening's performance would cause a sensation and be talked about all over town. The Come-Outers would glory in their leader's denunciation of him, and his own people would perhaps feel that it served him right. If he had only told Mrs. Coffin of what he intended to do. Yet he had not told her because he meant to do it anyhow. Altogether it was a rather humiliating business.

So that old bigot was the Van Horne girl's "uncle." It hardly seemed possible that she, who appeared so refined and ladylike when he met her at the parsonage, should be a member of that curious company. When he rose to speak he had seen her in the front row, beside the thin, middle-aged female who had entered the chapel with Captain Hammond and with her. She was looking at him intently. The lamp over the speaker's table had shone full on her face and the picture remained in his memory.

He stepped off the platform, across the road, out of the way of homeward-bound Come-Outers, and stood there, thinking. The fog was as heavy and wet as ever; in fact, it was almost a rain. The wind was blowing hard from the northwest. The congregation dispersed in chattering groups, their lanterns dipping and swinging like fireflies. The chatter dealt entirely with one subject—himself. He heard his name mentioned at least twenty times. Out of the gusty, dripping blackness came Mr. Badger's voice.

"By time!" crowed Josiah, "he was took down a few p-p-pup-pegs, wa'n't he! My! how Eben did g-gi-gi-give it to him. He looked tolerble white under the gills when he riz up to heave out his s-s-sus-sassy talk. And foolish, too. I cal'late I won't be the only town fuf-fuf-fool from now on. He! he!"

The noises died away in the distance. Within the chapel the tramp of heavy boots sounded as the lights were blown out, one by one. The minister frowned, sighed, and turned homeward. It is not pleasant to be called a fool, even by a recognized member of the fraternity.

He had taken but a few steps when there was a rustle in the wet grass behind him.

"Mr. Ellery," whispered a voice, "Mr. Ellery, may I speak to you just a moment?"

He wheeled in surprise.

"Why! why, Miss Van Horne!" he exclaimed. "Is it you?"

"Mr. Ellery," she began, speaking hurriedly and in a low voice, "I—I felt that I must say a word to you before—"

She paused and glanced back at the chapel. Ezekiel Bassett, the janitor, having extinguished the last lamp, had emerged from the door and was locking up. In another moment he clumped past them in the middle of the road, the circle of light from his lantern just missing them as they stood in the grass at the side under the hornbeam and blackberry bushes. He was alone; Sukey B. had gone on before, other and younger masculine escort having been providentially provided.

Mr. Bassett was out of hearing before Grace finished her sentence. The minister was silent, waiting and wondering.

"I felt," she said, "that I must see you and—explain. I am so sorry you came here tonight. Oh, I wish you hadn't. What made you do it?"

"I came,' began Ellery, somewhat stiffly, "because I—well, because I thought it might be a good thing to do. As I said—"

"Yes, I know. But it wasn't. It was so—so———"

"So foolish. Thank you, I'm aware of it. I've heard myself called a fool already since I left your church. Not that I needed to hear it. I realize the fact."

There was a bitterness in his tone, unmistakable. And a little laugh from his companion did not tend to soothe his feelings.

"Thank you," he said. "Perhaps it is funny. I did not find it so. Good evening."

This was priggish, but it must be borne in mind that John Ellery was very, very fresh from the theological school, where young divines are taught to take themselves seriously. He was ashamed of himself as soon as he said it, which proved that his case was not beyond hope.

The girl detained him as he was turning away.

"I wasn't laughing at that," she said. "I know who called you that—that name. It was Josiah Badger, and he really is one, you know. I was thinking of his testimony in meeting and how he called Ky—Abishai—a pepper shaker. That was ridiculous enough, but it reminded me of something else about Mr. Pepper, and I had to laugh. It wasn't at you, truly."

So the minister begged her pardon; also he remained where he was, and heard the drops from the tree patter hollow on his hat.

"I came after you," went on Grace rapidly and with nervous haste, "because I felt that you ought not to misjudge my uncle for what he said tonight. He wouldn't have hurt your feelings for the world. He is a good man and does good to everybody. If you only knew the good he does do, you wouldn't—you wouldn't dare think hardly of him."

She stamped her foot in the wet grass as she said it. She was evidently in earnest. But Ellery was not in the mood to be greatly impressed by Eben Hammond's charity or innate goodness. The old tavern keeper's references to himself were too fresh in his mind. "False prophet" and "worker of iniquity!"

"I'm not judging your uncle," he declared. "It seemed to me that the boot was on the other leg."

"I know, but you do judge him, and you mustn't. You see, he thought you had come to make fun of him—and us. Some of the Regular people do, people who aren't fit to tie his shoes. And so he spoke against you. He'll be sorry when he thinks it over. That's what I came to tell you. I ask your pardon for—for him."

"Why—why, that's all right. I think I understood———"

"I'm not asking it because he's a Come-Outer and you're a Regular minister. He isn't ashamed of his religion. Neither am I. I'm a Come-Outer, too."

"Yes. I—I supposed you were."

"Yes, I am. There, good night, Mr. Ellery. All I ask is that you don' think too hardly of uncle. He didn't mean it."

She turned away now, and it was the minister who detained her.

"I've been thinking," he said slowly, for in his present state of mind it was a hard thing to say, "that perhaps I ought to apologize, too. I'm afraid I did disturb your service and I'm sorry. I meant well, but—What's that? Rain?"

There was no doubt about it; it was rain and plenty of it. It came in a swooping downpour that beat upon the trees and bushes and roared upon the roof of the chapel. The minister hurriedly raised his umbrella.

"Here!" he cried, "let me—Miss Van Horne! Where are you?"

The answer came from a short distance down the "Turn-off."

"Good night," called the girl. "I must run."

Evidently, she was running. Therefore the young man ran after her. He caught up with her in a moment, in spite of some stumbles over the rough road.

"Here!" he commanded, "you must take the umbrella. Really, you must. You haven't one and you'll be wet thru."

She pushed the umbrella aside.

"No, no," she answered. "I don't need it; I'm used to wet weather; truly I am. And I don't care for this hat; it's an old one. You have a long way to go and I haven't. Please, Mr. Ellery, I can't take it."

"Very well," was the sternly self-sacrificing reply, "then I shall certainly go with you."

"But I don't wish you to."

"I can't help that. I'm not going to let you go unprotected thru this flood. Especially as you might have been at home before this if you hadn' stopped to speak with me."

"But you mustn't."

Uncle Amos Says:—"The time to shape an iron is when it is red hot. But the time for public opinion to shape itself is when it is cool and collected. The best thing the public could do just now would be to go to work and let its brain cool off."

"I shall."

Here was the irresistible force and the immovable object. They stood stock still in the middle of the road while the rain drops jumped as they struck the umbrella top. The immovable object, being feminine, voiced the unexpected.

"All right," she said; "then I suppose I shall have to take it."

"What?"

"The umbrella. I'm sorry, and you'll get dreadfully wet, but it's your own fault."

He could feel her hand near his own on the handle. He did not relinquish his grasp.

"No," he said. "I think, on the whole, that that is unreasonable. I should get wet and, tho I don't mind it when it is necessary, I——"

"Well?" rather sharply, "what are you going to do?"

"Go with you as far as your gate. I'm sorry, if my company is distasteful, but——"

He did not finish the sentence, thinking, it may be, that she might finish it for him. But she was silent, merely removing her hand from the handle. She took a step forward; he followed, holding the umbrella above her head. They plashed on, without speaking, thru the rapidly forming puddles.

Presently she stumbled and he caught her arm to prevent her falling. To his surprise he felt that arm shake in his grasp.

"Why, Miss Van Horne!" he exclaimed in great concern, "are you crying? I beg your pardon. Of course I wouldn't think of going another step with you. I didn't mean to trouble you. I only—if you will please take this umbrella——"

Again he tried to transfer the umbrella and again she pushed it away.

"I—I'm not crying," she gasped; "but—oh, dear! this is so funny!"

Mr. Ellery gazed blankly at her thru the rain-streaked dark. This was the most astonishing young person he had met in his twenty-three years of worldly experience.

"Funny!" he repeated. "Well, perhaps it is. Our ideas of fun seem to differ. I——"

"Oh, but it is so funny. You don't understand. What do you think your congregation would say if they knew you had been to a Come-Outers' meeting and then insisted on seeing a Come-Outer girl home?"

John Ellery swallowed hard. A vision of Captain Elkanah Daniels and the stately Miss Annabel rose before his mind's eye. He hadn't thought of his congregation in connection with this impromptu rescue of a damsel in distress.

"Ha, ha!" he laughed mournfully. "I guess it is rather funny, after all."

"It certainly is. Now will you leave me and go back to your parsonage?"

"Not unless you take the umbrella."

"Very well. It is a beautiful evening for a walk, don't you think so? Mr. Ellery, I'm afraid we shan't have you with us in Trumet very long."

"Why not?"

"Oh, because you're so very, very original. Are your sermons that way, too? Captain Elkanah doesn't like his ministers to be too original."

The minister set his teeth. At that moment he felt an intense desire to bid the Daniels family mind their own business. Then another thought struck him.

"Possibly your Uncle Eben might be somewhat—er—surprised if he knew you were with me. Perhaps he might have something to say on the subject."

"I guess he would. We shall know very soon. I ran away and left him with Mrs. Poundberry, our housekeeper. He doesn't know where I am. I wonder he hasn't turned back to look for me before this. We shall probably meet him at any moment."

She seemed to enjoy the prospect of the meeting. Ellery wondered what on earth he should say to Captain Hammond—that is, provided he was allowed to say anything.

Suddenly a heavier gust of rain and wind beat upon them. The minister struggled with the umbrella. The gust passed and with it the fog. An instant before it had been all about them, shutting them within inky walls. Now it was not. Thru the rain he could see the shadowy silhouettes of bushes at the road side. Fifty yards away the lighted windows of the Hammond tavern gleamed yellow. Farther on, over a ragged, moving fringe of grass and weeds, was a black flat expanse—the bay. And a little way out upon that expanse twinkled the lights of a vessel. A chain rattled. Voices shouting exultingly came to their ears.

"Why!" exclaimed Grace in excited wonder, "it's the packet! She was due this morning, but we didn't expect her in till to-morrow. How did she find her way in the fog? I must tell uncle."

She started to run toward the house. The minister would have followed with the umbrella, but she stopped him.

"No, Mr. Ellery," she urged earnestly. "No, please don't. I'm all right now. Thank you. Good night."

A few steps farther on she turned.

"I hope Cap'n Elkanah won't know," she whispered, the laugh returning to her voice. "Good night."

Ellery stood still in the rain and watched her. He saw her pass the lighted windows and open a door. Into a yellow radiance she flashed and disappeared. A minute more and the bulky form of Eben Hammond, lantern in hand, a sou-wester on his head and his shoulders working themselves into an oilskin coat, burst out of the door and hurriedly limped down toward the shore. On the threshold, framed in light, stood his ward, gazing after him. And the minister gazed at her.

From the bay came the sound of oars in rowlocks. A boat was approaching the wharf. And suddenly from the boat came a hail.

"Halloo! Ahoy, dad! Is that you?"

There was an answering shout from the wharf; a shout of joy. Then a rattle of oars and a clamor of talk. And Grace still stood in the doorway, waiting.

The lantern bobbed up the slope. As it reached the tavern gateway, the minister saw that it was now carried by a tall, active man, who walked with a seaman's stride and roll. Captain Eben was close beside him, talking excitedly.

They entered the yard.

"Grace! Grace!" screamed Captain Eben. "Gracie, girl, look who's come! Look!"

The tall man ran forward.

"Hi, Grace!" he cried in a deep, hearty voice. "Is that you? Ain't you got a word for your old messmate?"

The girl stepped out into the rain.

"Why! why, Nat!" she cried.

The big man picked her up bodily in his arms and carried her into the house. Captain Eben followed and the door closed.

(Continued Next Week.)

INTERNATIONAL

How You Dread Wash Day!

WE are talking to you, Mrs. Farmer. And we want to help you. You have the meals to get for the men folks on wash day the same as every other day—and there are the children to be looked after as usual, as well as your regular housework and chores. Even without these added tasks, the family wash is usually enough to break any woman's back and to wear her out generally. Working in the fields and around farm machinery makes dirty clothes—as you well know.

An **International Kerosene Engine**—1½-h. p. size—will take the hard work and backache out of the family wash for you as well as removing all of the dirt just as efficiently as you could do it yourself. You need a power washer and one of these little engines just as much as your husband needs a mower or grain binder. He doesn't cut the hay and grain with a sickle or scythe—modern machinery has taken the hard work and backache out of these tasks for him. So you are certainly entitled to an engine and power washer to do as much for you.

And between times the engine will churn the butter, turn the cream separator, shell corn for the chickens, turn the grindstone, pump water, saw wood and handle other chores, saving work for the whole family. Write for a descriptive catalogue so that you can show your husband just the engine you want. There are three sizes—1½, 3, and 6-h. p.

INTERNATIONAL HARVESTER COMPANY
OF AMERICA INC.
CHICAGO USA

No. 12.—
Chops 3 lbs. meat per minute.
Price, $5.00

No. 22.—
Chops 4 lbs. meat per minute.
Price, $8.50

ENTERPRISE

"ENTERPRISE"

2- to 8-qt. Stuffers,
4-qt. size, Japanned, $12.25
6-qt. size, Japanned, $14.00
8-qt. size, Japanned, $15.00

The name "ENTERPRISE" means Economy and Best Results in Making lard and sausage—whether for market or home use.

The "ENTERPRISE" Meat-and-Food Chopper cuts clean and without wasting the meat juices: Because it has four-bladed *steel* knife and perforated *steel* plate. It economizes in the kitchen, too.

The "ENTERPRISE" Lard Press and Sausage Stuffer saves lard. It stuffs sausage that won't spoil—the Patented Corrugated Spout keeps air from entering casing. Cylinder is bored TRUE.

Ask for "ENTERPRISE"—at your dealer's. Write us for free "Hog Book," by F. D. Coburn.

The Enterprise Mfg. Co. of Pa.
Dept. 82 Philadelphia

No. 5.—Price, $3.50
Chops 1½ lbs. meat per minute.

No. 10.—
Chops 3 lbs. meat per minute.
Price, $5.50

Markets

PHILADELPHIA PRODUCE

Philadelphia, Pa., Oct. 20, 1919.

The offerings of potatoes this week have been a very little heavier than they were last week which as was noted in these columns had been the heaviest of the season. The demand however, has been quite active, in fact just about equal to the offerings, so that there has been no accumulation and the market is a little firmer than it was a week ago. This applies especially to the potatoes coming from New York State, which are showing some improvement in quality. These New York State potatoes are now selling mostly $2.25@2.35 per cwt. The potatoes coming from the state of Maine are selling all the way from $2.40@2.60 per cwt. Pennsylvania grown potatoes as usual are showing the best of quality and are bringing the highest prices, selling generally from $2.50@2.75 per cwt., with the extra fancy at $2.80@2.90 per cwt. The New Jersey Giants sold this morning at $3.25@3.35 per 150-lb. sack with the No. 2's at $2.15@2.30 per sack. A rather peculiar feature of the market however, is the fact that the potatoes hauled in by the nearby farmers are selling at slightly lower prices than were prevailing a week ago as they are ranging mostly from 85c@$1.10 per ⅝-basket, altho a few are selling up to last week top quotations of $1.15.

Sweet potatoes from the Eastern Shore section while only in moderate supply are meeting a rather slow demand and prices are from 25@50c lower; No. 1 is selling today at $3@3.25 per barrel with the No. 2's at $1.75@2.25 per barrel. The New Jersey sweet potatoes remain from firm and active however, at full former values and are bringing from 75c@$1 per ⅝-basket for the yellows and 90c@$1.10 for the Reds. No. 2 New Jersey Sweets are about steady at 35@55c per basket.

Vegetables

Owing to the much lighter supplies, green beans are much firmer and higher than they were a week ago, the New Jerseys selling at 75c@$1.50 per ⅝-basket. The wax beans are also higher and bring 75c@$1.25 per ⅝-basket. Quite a few beans from Norfolk are now making their appearance on the market and are selling from 75c@$2 as to quality. Bunch beets are ruling about steady at mostly 2½@3½c, with the fancy beets from Pennsylvania up to 4c per bunch. New Jersey and Pennsylvania carrots remain about steady from 2@3c per bunch with the loose carrots from $2.25@3.25 per barrel. There are now quite a few brussels sprouts on the market which are selling at 15@18c per quart for fancy green. Some sprouts, however, showing yellow are of uncertain value and sell from 10c per quart down, as to condition. The cabbage market is easier and $25 per ton is top on the best New York State domestic, with poorer grades selling down to $20. Best New York State Danish sells at $35 per ton, with lower grades down to $30.

Cabbage hauled in by the nearby farmers sold from 40@60c per ⅝-basket. Most of the cauliflower now coming is from Long Island, altho there is still some from Western New York here, the former sold this morning mostly $2.75@2.85 per crate, while the western New York brought $1.50@2. Fancy celery is a little firmer than it was last week, best selling readily at 50@75c per bunch. New York state celery in the rough is selling from $2.50@4.75 per crate. Michigan celery is about 25c per crate higher, selling generally at $1.50@1.75 per crate.

New Jersey celery hearts are practically unchanged at 4@7c per bunch. Most of the corn now arriving is poor and the range of prices is very wide for that reason. The New Jersey stock in ⅝-basket is selling all the way from 50c@$1.25. While the Penna. brings from $1@3 per 100 ears. Cucumbers are scarce, and fancy stock would easily bring $3.50 per bushel or better. Egg plants show a little change from last week, supplies continue, scarce and the best are selling $1.50 per ⅝-basket, with poor down to 75c@$1. Horseradish is firm at $7@8.50 per cwt.

Lettuce is getting scarce. New Jersey is suppplying most of the offerings at this time with prices ranging from $1.50@2.75 per box. Lima beans show still another advance with supplies light and ⅝-baskets are now selling from $2.25@2.75 with bushel hampers at $3.25@3.50. Mushrooms are not bringing near as high a price as they did a week ago but at the same time are firm and active at $2@2.50 per 3-lb. basket. Okra is rather scarce and selling from $3@4 per hamper. Fresh arrivals of onions have been rather light for the past several days and the market is now more active and higher, best now selling at $3.60@3.75 per cwt. with others at $3.25@3.50 per cwt. while medium grades sold at $2.50@2.65 with small picklers at $1.25. A car of white boiling onions were being sold at $4 per cwt. Parsley is dull and draggy at 75c@$1.25 per bushel hamper. There are no peas on the market and some fancy stock would bring a high price. New Jersey peppers are lower due to the quality. The green ones selling from 15@40c per basket with the reds from 35@60c per basket. Strictly fancy peppers, would probably exceed these prices. Romaine is firmer and higher at 75c@$1.50 per box. Radishes show little or no change at $1.50@2 per 100 bunches.

Tomatoes are scarce, and occasional strictly fancy lot sell up to $3 per ⅝-basket the bulk of the sales however range from $1@2.50 per basket. Hot house tomatoes are firm and active at 10@20c per lb. New Jersey and Penna. white turnips are much more plentiful and the market is inclined to be dull and draggy at mostly 25@40c per ⅝-basket with strictly fancy up to 50c. The Penna. yellow turnips however, continue firm at 75@90c. New Jersey spinach is plentiful and lower with sales ranging mostly at 15@30c per ⅝-basket with extra fancy up to 35c. Yams are scarce and wanted at $3@3.75 per barrel.

Fruits

Apples are meeting a good active demand and the somewhat lighter offerings are working out in good shape with all grades a little higher. Fancy apples especially are meeting a strong market at the stronger prices. Another thing there are not so many ungraded apples in the offerings which tends to make higher values. Prices on the various varieties are ranging at this time about as follows: Baldwins, $5@8; Ben Davis, $4.50@6.50; Ganos, $4.50@6.50; Greenings, $3.50@8; York Imperials, $5@7.25; Starks, $4.50@7; Staymans Winesaps, $5@8.25; Grimes Golden, $6@8.

Pears are firmer and higher on strictly fancy fruit with ordinary firm at unchanged prices. The range being as follows: Bartletts, $7@12; Seckels Fancy, $15; bushels, Seckels, $3.50@5; Sheldons, $4@4.25; Clarigeau, $2@2.75.

The shortage of sugar has practically stopped the demand for crabapples and quinces which are selling very slowly at very low prices. The grape season is drawing towards a close and prices are advancing almost daily. At this writing the large Jumbo baskets of Concords are selling at $1.25@1.30 per basket while the pony baskets are selling from 25@26c per basket. As we predicted in these columns last week chestnuts are selling at much higher prices, the best bringing 15@18c per lb., and poorer from 10@12c.

Poultry

There has been a continued active demand for all kinds of live poultry and prices are somewhat firmer. Live geese and live turkeys are beginning to again make their appearance on the market. Fancy fowls are cleaning up closely at 34@35c per lb., with poorer grades selling around 30@32c per lb., Chickens are selling all the way from 28@33c per lb. Old roosters are a trifle lower than they were a week ago selling mostly at 22@24c per lb. Ducks are firmer and higher the White Pekins selling at 30@32c, and the Indian Runners from 28@30c; the few geese that are arriving bring from 27@30c and turkeys are selling from 35@38c.

Eggs

While the egg market is showing practically no change in price from last week's quotations, the market is ruling very firm and active and strictly fancy new laid eggs are commanding a big premium above quotations which are about as follows: Pennsylvania and other nearby current receipts 62; nearby firsts 64c; Western firsts, 62c; Western extra firsts 64c.

LANCASTER PRODUCE MARKETS

Lancaster, Pa., Oct. 20, 1919.

Eggs went over the top this morning, 60 cents per dozen, the highest price ever recorded in the open market here. There was a plentiful supply. Butter, also plentiful, was held firmly at 70 cents per pound, and despite the largest apple crop in the history of the county, cider was advanced from 10 to 30 cents per gallon. Other produce was firm at former prices.

Butter and Eggs.—Creamery butter, 75c per lb.; country butter, 70c. Fresh eggs, 78@80c per dozen; duck eggs, 70@75c; goose eggs, 10c each.

Poultry.—Dressed old chickens, $1.75@2 each; dressed young chickens, 85c@$1.50 each.

Vegetables.—Corn, 10@20c per dozen; beets, 5c per bunch; beans, 10@12c ½ pk.; tomatoes, $1 basket; do., 6@8c box; lima beans, 20c quart; cauliflower, 10@20c head; cabbage, 5@10c per head; sweet potatoes, 35c ½ peck; potatoes, $1.75@2 per bu.; do., 30c ½ peck; turnips, 15c ½ peck; spinach, 20c ½ peck; lettuce, 13@15c head.

Fruits.—Apples, 40@60c ½ peck; pears, 20@25c ½ peck.

Grain Market.—Wheat, $2.20 per bu.; rye, $1.65; oats, 85c; corn, $1.95. Timothy hay, $30 per ton; mixed hay, $28; wheat straw, $10; oat straw, $5.

BALTIMORE PRODUCE

Baltimore, Md., Oct. 20, 1919.

Butter.—Creamery, western fancy, 66@67c; choice, 65@66c; pound prints, 67@68. Nearby rolls, 44@45c. Dairy prints, 44@45c.

Eggs.—State, Pennsylvania and nearby, 60c; Eastern Shore and Virginia, 60; Southern, 58c.

Live Poultry.—Springers, 32c lb.; old roosters, 21@22c; old hens, 32c lb.; ducks young, 26@28c; do., poor, 24@25c; guinea fowls, 70@75c.

Grains.—Bag lots by sample, $2.15@2.30. Wheat, new, No. 1 red, $2.30 do., No. 3, $2.31⅝; garlicky, $2.29; Corn, $1.82. Oats, standard, white, 75@78c; rye, nearby, $1@1.50.

Hay.—No. 1 timothy, $31 ton; do., standard, $30 ton; light clover, mixed, $29@30 ton. Clover, mixed, $28. Tangled rye straw, $14.50. Wheat straw, $12@13. Oat straw, $14@15 ton.

Western Spring Bran, per ton, in 100-pound sacks, $42@43; City Mills Winter Bran, per ton, in 100-pound sacks, $50; brown middlings, per ton, in 100-pound sacks, $55; white middlings, per ton, in 80-pound sacks, $67. Quotations on City Mills feeds are jobbing prices.

NEW YORK PRODUCE

New York City, Oct. 20, 1919.

Butter.—Firm; receipts, 6,754 tubs; creamery, higher than extras, 70½@71c; creamery extras, 92 score, 70c; firsts, 58@69c; packing stock, current make No. 2, 47c.

Eggs.—Firm; receipts, 6,984 cases; fresh gathered extras, 69@70c; extra firsts, 65@68c; firsts, 60@64c; state, Pennsylvania and nearby western hennery whites; fine to fancy, 92@95c; state, Pennsylvania and nearby hennery, whites, ordinary to prime, 70@90c; state, Pennsylvania and nearby hennery browns, 74@76c; do., gathered browns and mixed colors, 70@72c.

Cheese.—Firm; receipts, 4,576 boxes; state, whole milk flats, current make specials, 31½@32c; do., average run, 30½@31c; state, whole milk, twins, current make, specials, 30½@31c; do., average run, 30@30¼c.

Poultry.—Live, steady; chickens, 27c; fowls, 26@30c; old roosters, 19c; turkeys, 30@35c; dressed, steady; fowls, 26@39c; old roosters, 21@22½c; chickens, 29@45c; turkeys, 35@45c.

Vegetables.—Potatoes, Long Island, $4@4.75 per 165-lb. bag; Jersey No. 1, $2.50@3.50 bag. Beans, green, $1@3.50 basket; do., lima, $1.50@3.50 basket. Beets, $2@2.50 per barrel. Carrots, $1.50@2.50 per bbl. Cabbage, $3@6 per 100. Lettuce, 50c@$2.50 basket. Tomatoes, $1@3 per bushel. New Jersey, $1@2 carrier.

Fruit.—Apples, McIntosh, $5@10; Wealthy, $6@8.50. Baldwin, $3.50@6; Jonathan, $6@7.50.

PHILADELPHIA LIVE STOCK

Philadelphia, Pa., Oct. 20, 1919.

Receipts of live stock for week ending October 18 were as follows:

	Beef Cattle	Sheep and Lambs	Hogs
Total for Week	3,155	7,423	7,211
Previous Week	2,489	8,321	6,422

Calves.—Receipts of calves last week were 1,530 head against 1,646 head week previous.

Beef Cattle.—The market for steers ruled firm and higher under light offerings and a good demand. Cows were steadily held at former rates. Calves were more freely offered, dull and easier. Steers, good to choice, $15@16.50; do., fair to good, $13@15; common to fair, $11.50@13; cows, fat, per lb., good to choice, cornfed, 9@10½c; fair to good, 7½@9c; do., common to fair, 6½@7½c; calves, extra, choice, $22@22.50; fair to good, $18@20; common, $12.50@16.50; heavy, $8.50@12.50; Tennessee, choice, $16@18; other southern, $9@13.

Sheep and Lambs.—The market ruled steady under moderate offerings and a fair demand for desirable stock. Sheared sheep, wethers, extra, $10.50@11; good to choice, $9@10; medium, $7@8; common, $3.50@5; ewes, fat, heavy, $7.50@8.50; spring lambs, choice, $15@15.50; medium, $13.50@14.50; culls and common, $11@13.

Hogs.—Offerings were more liberal and the market ruled weak and lower, due to a slow demand and easier western advices. Quotations for best western, $17@17.50; nearby good, $14.50@15.50.

City Dressed Stock.—The market ruled firm thruout and prices of steers, cows and heifers were held higher. Demand was good. Quotations: Steers, 19@26c; heifers, 17@23c; cows, 13@19c; calves, city dressed, choice, 28@30c; country dressed, 26@28c; sheep, 18@22c; lambs, spring, 25@28c; hogs, 24c.

LIVESTOCK

Lancaster, Pa., Oct. 20.—Cattle.—Receipts, 9,330 head, against 9,120 last Monday; market active; prices steady; many head unsold; best-grade steers, $14@15; medium to good steers, $12.50@14; plain to medium steers, $10.75@12.50; common to medium steers, $9.50@10.75; choice to prime heifers, $12.25@13.50; good to choice heifers, $11.25@12.25; fair to good heifers, $10.25@11.25; medium to fair heifers, $9.50@10.25; common to medium heifers, $7.50@9.50; good to prime cows, $9.50@11.50; fair to good cows, $7.75@9.50; medium to fair cows, $6.50@7.75; common to medium cows, $5@6.50; good to choice bulls, $10@11; fair to good bulls, $8.50@10; common to medium bulls, $7@8.50; good to choice oxen, $10@12; fair to good oxen, $8.50@10; common to medium oxen, $6@8.50 common to choice calves, $18@21; good to choice feeding steers, $12@13; common to fair feeders, $8.50@10.25; good to choice stockers, $10@11.50; common to medium stockers, $7@9; good to choice stock bulls, $9@11; common to fair stock bulls, $6.50@8; good stock heifers, $9.50@11; common to fair stock heifers, $6.50.

Hogs.—Receipts, 566 head; market fairly active; prices much lower; good to prime, $15@16.50; light to medium, $14@14.50; roughs, $10.

PHILADELPHIA HAY AND GRAIN

Philadelphia, Pa., Oct. 20, 1919.

Baled Hay and Straw.—Receipts, 84 tons of hay. Quiet but steady. Quotations: Timothy hay, No. 1, $32; No. 2, $28@30; No. 3, $24@27; clover-mixed hay, light mixed, $29@30; No. 1 mixed, $26@27; straw, No. 1 straight rye, $14.50; No. 2 do., $12.50@13; No. 1 tangled rye straw, $13; No. 2 do., $12@12.50; No. 1 wheat straw, $12.50@13; No. 2 do., $11.50@12; No. 1 cut straw, $12.50@13; No. 2 do., $11.50@12.

Bran.—Sold slowly and ruled weak. We quote: Car lots, to arrive, including sacks, western soft winter bran, in 100-lb. sacks, per ton, $42.50@43; spring bran, in 100-lb. sacks, per ton, $42@43.

Corn.—Yellow, to arrive, $1.58@1.60.

Oats.—No. 2, white, 80½@81c; No. 3, 79½@80c.

NEW YORK HAY AND GRAIN

New York City, Oct. 20, 1919.

Feed.—The market for mill feed was inactive and prices were again easy, reflecting a continued pressure of offers from the mills where stocks are apparently large. Local buyers were very indifferent and the volume of business was small.

Quotations: City feed bran, $42; middlings, $54, in 100-pound sacks; red dog, $68, nominal, in 100-pound sacks; Western spring bran, $41.50@42; standard middlings, $46.75@47.50; flour middlings, $50@60; red dog, $68@69, all in 100-pound sacks, 30-day shipment. Oat feed, $30@31; rye middlings, $52. Cottonseed of meal, October shipment, $75.50; linseed oil meal, $74, in 100-pound sacks.

Hay and Straw.—Trade is quiet and market holds about steady at unchanged prices. A river barge arrived yesterday and the few sales reported are about in line with quotations, tho $32 seems to be about top on No. 2 in small bales at the close. Rye straw selling largely at $16, tho occasional sales are reported at Pennsylvania yard at $15. Oat straw has sold up to $16.

Hay.—No. 1 large bales, $35 ton. No. 2, $32@33 ton; No. 3, $28@30; shipping, $26@28 ton. Fancy light clover mixed, $33 ton. Clover, No. 1, mixed, $31@32.

Straw.—Per ton, No. 1 rye, $16; No. 1 oat, $15@16.

Wheat.—No. 2 red, $2.37½; No. 2 hard winter, $2.37½.

Corn.—No. 2 yellow, $1.54¾; No 3 yellow, $1.54¼.

Oats.—No. 2 white, 82½c; No. 3 white, 82c.

Rye.—Export, $1.58.

PITTSBURGH HAY AND GRAIN

Pittsburgh, Pa., Oct. 20, 1919.

Hay.—No. 1 timothy, $29.50@30; No. 2, $27@28; No. 3, $24@25; No. 1 light mixed, $28@28.50; No. 1 clover mixed, $30@30.50; New No. 2 clover mixed, $26@27.

Straw.—Receipts of long clean oat straw light, demand good. Wheat straw receipts light demand good.

No. 1 oat, $11.50@12; No. 2, $11@11.50; No. 1 wheat, $11@11.50; No. 2, $10.50@11; No. 1 rye, $11.50@12; No. 2, $11@11.50.

Ear Corn.—Receipts and demand about equal. Market quiet.

Oats.—Receipts about equal demand. Market steady, No. 1 white, 77@77½c; No. 2, 76½@76¾c; No. 3 white, 75@75½c.

PHILADELPHIA DAIRY MARKET

Philadelphia, Pa., Oct. 20, 1919.

Butter.—Receipts, 2,242 tubs. The market ruled firm at the late advance. While wholesale trade, as usual on the last day of the week was quiet, there was sufficient inquiry in a jobbing way to absorb the limited offerings of fine stock. The Produce Exchange was closed as usual on the last day of the week. Quotations: Fresh, solid-packed creamery, fancy, high-scoring goods, 70½@72½c, the latter for jobbing sales; extras, 69½c; extra firsts, 66@67c; firsts, 57@61c; seconds, 53@56c; sweet creamery, choice and fancy, 71½@73½c; do., fair to good, 61@69c; ladle-packed, as to quality, 48@50c; packing stock, 40@48c; fancy brands of nearby prints jobbing at 76@78c; good to choice, 66@75c; fair, 60@64c.

Cheese.—Offerings light and market firm, with demand fair. The quotations were as follows: New York, whole-milk flats, fancy, 32c; fair to good, 30½@31½c; Wisconsin, whole-milk flats, fancy, 31¼@31½c; fair to good, 30@31c; jobbing sales of fancy goods, 32½@33c.

NEW YORK MILK MARKET

New York City, Oct. 20, 1919.

Trade has been unsettled the past week owing to the harbor strikes and difficulty in getting milk delivered any where near schedule time. Surplus showed a decrease, altho plenty to keep most of the manufacturers busy. The rates for October in 200-mile zone for 3 percenth is $3.11 per 100 lbs. Add 4 cents per 100 lbs. for each one-tenth of one percent extra butterfat.

Receipts of milk and cream in 40-quart cans for the week ending October 18, 1919, were as follows:

Railroad	Milk	Cream
Erie	40,093	3,812
Susquehanna	7,183	107
West Shore	14,980	1,914
Lackawanna	60,582	2,528
N. Y. Central (long haul)	145,221	2,501
Ontario	46,214	1,972
Lehigh Valley	45,464	899
New Haven	6,772	82
Pennsylvania	12,463	485
Other Sources	6,000	250
Totals	384,972	14,550
Same week last year	357,499	11,137

CHICAGO CORN LOWER

Last Week's Bulge of More Than Six Cents the Factor

Chicago, Oct. 20.—Corn prices declined today under selling which was based largely on the fact that there had been a bulge of more than six cents within a week. Closing quotations were heavy, ½c to 1⅝c net lower, with December $1.25⅛ to $1.25¼ and May $1.23¼ to $1.23½. Oats lost ¼c to ½c.

It was an overbought market in corn, and when bears noted a lack of support they immediately pressed their advantage. Lightness of offerings was responsible for a moderate upturn which took place at the opening. Weakness of hog values tho tended to discourage buyers of corn. In addition, many traders expressed doubt that farmers were in general adopting a holding policy. Then attention began to focus on opinions that a setback was due after the recent sharp rally. Once on the downgrade, the market acquired momentum, and finished at about bottom figures of the day.

Oats were steadier than corn owing to advices that despite the longshoremen's strike some export demand continued.

LINSEED OIL MARKET

There is a moderate demand for linseed oil, particularly for January forward. Yesterday the prices were undisturbed at $1.72 for October, November and December, in carlots, $1.75 for lesser quantities in lots of five or more barrels and $1.78 for single barrels. For January forward the price also continues unchanged at $1.61. There has been a good inquiry for export, as a result of lower prices on this side and some business for futures has been done, tho like everything else the movement abroad, has been hampered by the high rate of exchange and general disturbance to shipping, and in view of a strong market in prospect for next year crushers are cautious about committing themselves for anything like heavy obligations.

TOBACCO MARKET

In Pennsylvania the week was characterized by much speculation as to prices to be expected for the new crop, practically all of which is now safely in the shed and, much of which was so nearly cured as to be safe from the danger of either pole burn or freezing weather. It is conceded by buyers as well as sellers that the crop is one of good quality and that it will command a corresponding price, but what this will be—"aye, there's the rub." It is sure that growers will not be stampeded to sell as in past years and that they will hold for fair prices. Encouraged by the degree of success which has attended those who held last year's crop practically all will await a time of fair valuation which it is hoped will not be so long delayed. Growers should not forget that there is, even at present, a limit to prices and that when this shall have been reached no more should be expected. All have witnessed the predicament of those who, no matter what valuations may be, are sure to hold in the expectation of further advances when some day things reverse and they are found still waiting. This of course does not mean that sales should be made at the first opportunity or at prices corresponding to those paid in many instances last year, but that when a fair price, affording a reasonable profit, is to be had it is normally better to accept it and thus unload the uncertainty of the future, and enabling the earlier use of money and attention to other matters which so crowd upon the farmer who grows other crops as well as tobacco.

Oregon has approximately 10,000 acres of walnuts, according to recent reports from there, many of which are fast coming into production. The Sheridan, Newburg, Hillsboro, Eugene and Salem districts produce most of the walnuts of the state.

COUNTY NOTES

Tioga County, New York, Oct. 16.—Shippers began carrying potatoes about three or four weeks ago, paying $1.50 as the highest price delivered at the car and gradually the price declined, until on October 11, 90 cents was all that they paid, and the highest price paid now.

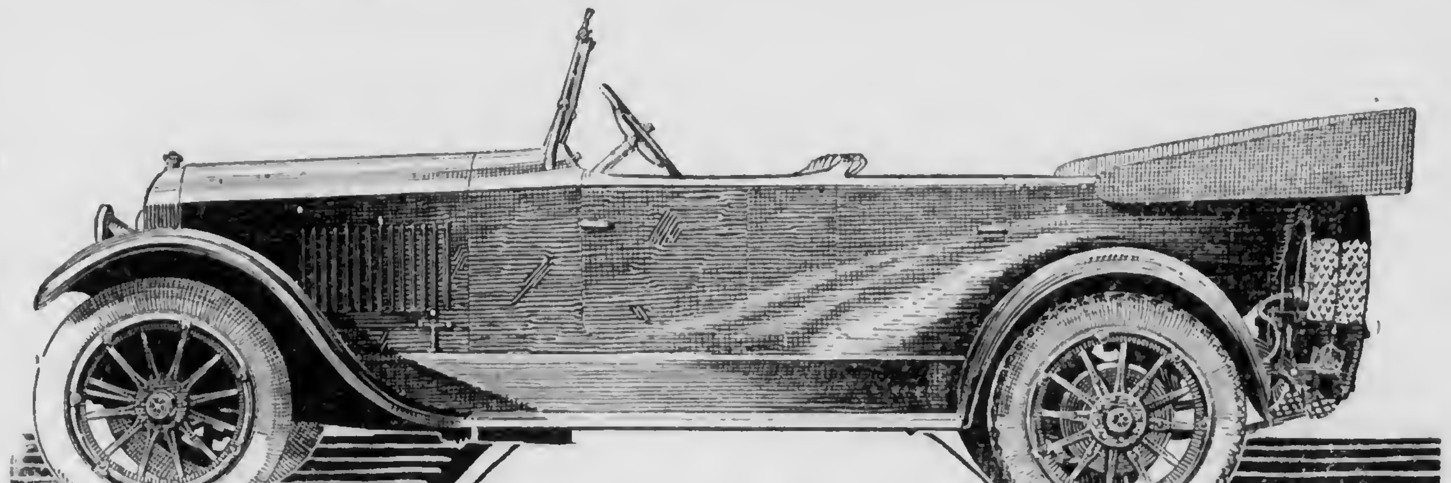
On account of no killing frost until October 7, the potatoes did not ripen, the vines being as green as in midsummer, and the potatoes could not be dug, as they skinned so badly, and as soon as they were in condition to be handled, the price dropped. This is a potato growing county, usually, but for the past three years, the acreage planted has been less and less, on account of the scarcity of efficient farm help and the exhorbitant prices charged for help of any sort. And, if the labor conditions continue, less acreage will probably result in the years to come. Potatoes turn out fairly well and no complaint about rotting as yet, but if the present wet, muggy weather continues, it will promote rot on those still undug. Corn, both state and silage corn, was a bumper crop all thruout the county. Silo filling has been in vogue for weeks and nearly every silo is full, and corn to spare, some farmers having two large silos. Such fine, even growth of corn, was never witnessed here, and much of it was immense in height, sturdy and well eared, many picking off loads of the ears for husking before using to fill the silos, as there was so much more corn in the ear, than was needed for ensilage.

No apples, to speak of, only occasionally a tree with a few on. Pears were quite plentiful in some orchards, other trees were barren. A few peaches and plenty of gapes on most vines. Gardens were fine with abundant growth, and squashes, sweet corn, tomatoes, beans, etc., abundant for family use in winter. Bushels and bushels grew on a little land, which will partly compensate for the lack of fruits, altho berries of all kinds were plentiful. The absence of apples will prove a serious handicap.—M. I. C. A.

Snyder County, Pa., Oct. 6.—Nice weather the past week, temperature some few days 88. Had some fine rains of late. We had a few frosts but no damage done so far. Farmers are busy seeding, cutting corn and some are husking corn. The corn crop is very good. Plenty of pasture and live stock looking well. Some public sales bringing good prices for stock, etc. Some farms are being sold in this locality. The Packers Island Farm was sold last week for $75,800; it contains 229 acres. Very little sickness in this locality. Markets.—Wheat, $2.15 bu. Corn, $1.50 bu. Oats 65c bu. Eggs, 48c dozen. Butter, 60c pound. Lard, 30c pound. Ham, 32c pound. Shoulder, 30c pound. Bacon, 30c pound. Chickens, 24c pound. Onions, $1 bushel. Dried apples, 10c pound.—S. D. D.

Cumberland Co., N. J., Shiloh, Oct. 4.—Weather warm with heavy fogs. Hogs dying with disease. Pumpkin crop a failure. Plowing for wheat. Red skin potatoes are looking good. Price of tomatoes has gone down. Apple crop poor. Silos being filled. Tomatoes are carted far from where they are raised by auto truck. Cider apples bring as high as 40c a basket. Corn is being cut.—C. J. S.

The proper adjustment of the threshing machine may mean several more bushels of grain to credit to your field.



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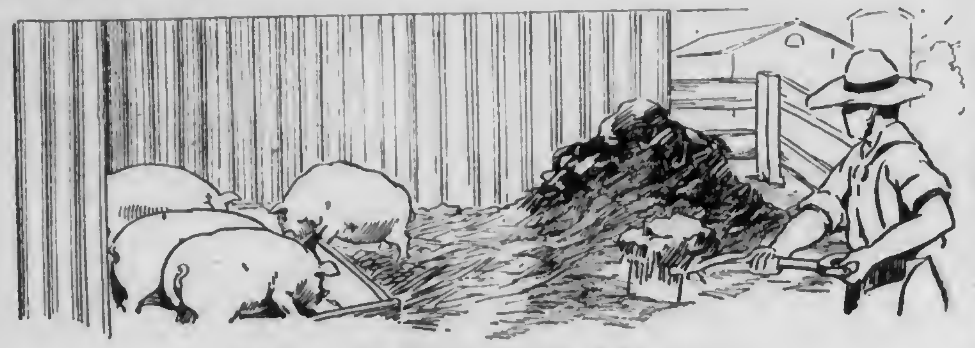

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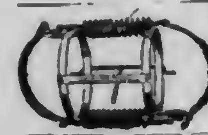

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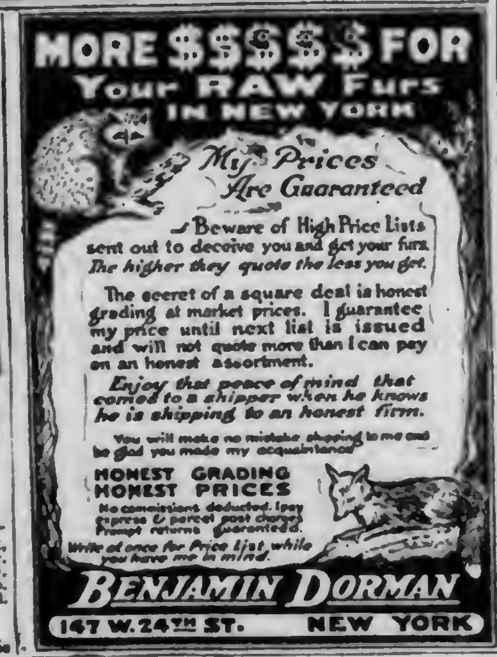

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THE 1919 POTATO CROP

In the heavy producing states of Michigan, Wisconsin and Minnesota, the production promises to be 55,628 cars, an increase of 553 cars over the September 1 estimate, compared with 63,500 cars last year, or 88 percent of last year's crop. A decease during the month has occurred in the Rocky Mountain sections, particularly in Colorado, which has declined from the estimate of 10,030 cars September 1 to 7,662 cars October 1, or 52 percent of last year's crop.

Conditions in the northwest have improved to some extent during the month. Oregon, Idaho and Washington promise to ship 11,723 cars or 223 more than on September 1, as compared with 13,205 cars last year, or 89 percent of last year's crop. California, Utah and Nevada have shown little change since last month and now promise to ship 6,185 cars as compared with 7,365 cars last year.

Maine now promises a commercial potato crop that will be loaded in cars for outside shipment, or 25,750 cars, an increase of 1,282 cars over the September 1 estimate, but 1,172 cars less than last year. The ten year average crop in Maine is 28,650 cars so that the crop this year is about 2,900 cars below average. The increase during the month has occurred in Aroostook County which, with 76,000 acres and an indicated average yield of 250 bushels per acre, means a production of about 19,000,000 bushels, of which 15,500,000 bushels, or 22,150 cars are classed as commercial and will be moved out. The above are conservative figures and the yield may even run to 265 bushels per acre. Some rot has appeared, but is not regarded as serious yet. Quality is excellent.

Pennsylvania. The condition of the commercial potato crop in Pennsylvania is 79 percent of a normal, which is the same as a month ago. Harvest is about half completed with fairly good yields; there has been very little blight; some rot is reported in the northern counties. Lehigh County promises to ship slightly over 2,000 cars.

Michigan. The first half of September passed without any good rains except over small localities. During the latter half of the month rains have been quite general over the state, and the prospect has improved considerably. In some of the northern interior districts frost has damaged the vines, but over much of the state until October 1 there has been no damaging frost and the tubers are still growing. Many report that the number in the hill is small but that they are attaining good size, and that the quality is good. In other sections they are running small in size but numerous in the hill. There has been much tip-burn, but so far as known, late blight has not appeared in any part of the state.

Minnesota. Due to rains and good growing weather and lack of frost, the commercial potato crop shows a slight improvement over one month ago. While blight developed somewhat on the late crop, the favorable weather will more than offset this damage. Last month the estimated carlot movement was 24,000 cars while on October 1 the carlot movement is estimated at 24,500 as compared with 26,000 in 1918. The carlot movement in the eastern district, or early potato belt, will be lighter than last year and in the south and southweestern portion of state, where about 600 cars moved last year, there will be a considerable decrease. The western and central districts will not show much change from last year if cars can be secured, especially in the western and Red River Valley district. It is estimated that about 80 percent of crop sold by grades were No. 1; 5 percent No. 2, and 1 percent culls, these going to starch factories. About 14 percent of crop will be marketed on field run basis.

Wisconsin. The commercial potato crop of Wisconsin showed a slight increase in quantity compared with a month ago. Beneficial rains during the first week of September caused a considerable increase in the Waupaca-Portage County prospect. The Barron-Eau Claire District also showed some gain. Elsewhere in the state there was little change. The forecasted production for the commercial potato carlot movement, based on October 1 conditions, is 21,300 cars, compared with a forecast on September 1 of 20,750 cars, and with 25,510 cars shipped last year and 31,300 cars in a year of full normal production. The present condition of the crop indicates a prospect of 71 percent of a normal yield per acre, or approximately 97 bushels per acre, compared with 69 percent a month ago, 81 percent on October 1 last year, and a ten year average of 76 percent. As the acreage is below normal this year the total production is estimated at 68 percent of normal, compared with 66 percent a month ago. Harvesting is well under way in the Northern Districts and just beginning in the Southern Districts. For the state as a whole 73 percent of the crop still remains to be harvested. In the northeastern district, frost killed the vines on September 24, but in the remainder of the state the vines are still green. Potatoes now being received at warehouses are still quite green, but of good size and quality. A larger percentage than was expected is grading U. S. No. 1.

New York. Most of the important potato sections escaped frost until September 27, when about a third of the state was frosted. Late plantings have had an opportunity to continue growth and in consequence they will yield more than was expected a month ago. Except on Long Island, late blight caused very little damage before September 1, but since that time it has spread over nearly all parts of the state, except north of the Adirondacks, and has caused more or less rot in practically every field. East of the Hudson in Washington and Rensselaer counties, in the lower Hudson Valley and in a few other localities, the rot has been very severe, destroying half or more of the crop in some fields. On Long Island where the rot has destroyed approximately 45 percent of the late crop, conditions are now improving and it seems likely that shipments will be nearly as large as they were last year when 4,400 cars were shipped. As a result of these changes the total carlot movement from this state is now estimated at 9,900 cars. This is about 500 cars more than was estimated last month and about 750 carloads less than the estimated shipments last year. As a result of the losses occasioned by shipping immature and partly diseased potatoes the price in some shipping sections is unsettled at the present time.

If we still had town criers, you might get along without your home town newspaper. But who wants to go back to the days of the town crier?

COUNTY NOTES

Lebanon Co., Pa., (SE), Oct. 13.—The past several weeks have been unusually warm and pleasant. We have had, as yet, no killing frost. Wheat is practically all sown and is coming up nicely. Cutting of corn is also almost completed and our people are busy husking it. The yield promises to be good, ears being large and heavy. Several farmers cut forage crops of hay last week. The contractors are still busy at road repairing in this county. The William Penn Highway is finished in Lebanon Co., and is in first class condition. Most farmers' flocks are molting this month and the egg harvest is correspondingly less. The County Teachers' Institute will be held next week, October 20-24. Eggs are 62 cents per dozen; old chickens 24 cents and broilers 25 cents per pound. Corn is $1.75, oats 80 cents and potatoes $1.70 per bushel. All of our people are glad that the daylight saving repeal will take effect in two weeks.—Leonard F. Strickler.

Cattasauqua Co., N. Y., (SC) Oct. 13.—Weather, variable. Potato digging, apple picking where there any to pick, plowing, etc., keep farmers busy when they are not attending auctions which are numerous. Many farms being sold at high prices. Early potatoes a light crop, later one average crop selling at $1.25 bushel. Apple (Spies) in demand, $2 to $2.75 bushel. Eggs 57 cents; butter, 65c; cheese, 30@31c. Many cows being auctioned off at $60 to $130 each. Many famers buying autos.—H. M. Beeles.

Mattawana, Miffin Co., Pa., (C), —Warm and rainy for some time, some seeding to do yet on account of it being too dry earlier in the season ground was too hard to get in order, not very much corn husk yet, some to cut yet, silos all filled with fine large fodder and corn. New corn selling for $1.25; some have raised to $1.5? on account of high cost of labor. Help for farm work is just as hard to get as during the war, nearly all the soldier boys are going elsewhere to work, public works are paying wages beyond what the farmers can afford, therefore, much of the farm work is neglected; even farmers own boys not near of age are getting the money craze, and leaving their fathers stick and going off to public works, sacrificing respectable, well-to-do homes for the desires of the present age. Prices on all food products are still soaring higher making matters worse and making it almost impossible for poor people to have enough to eat and wear. Eggs, 50c; butter, 60c; potatoes, 40c a peck; apples, 45c a peck.—J. H. Byler.

FARMERS' NATIONAL CONGRESS

Every farmer and his family who can possibly leave home for two or three days should plan to attend the national and state conference of farmers and home makers at Hagerstown, Md., Oct. 28th to 31st. This is the first time that the Farmers' National Congress has ever met in Maryland. Leaders in agriculture from all parts of the United States will attend this great meeting.

All of the state associations affiliated with the Maryland Society including the Horticultural Society, Crop Improvement Association, Dairymen, Sheep Growers, Vegetable Growers and Beekeepers will meet in conjunction with the Congress. A spendid program has been arranged for the three days. Prominent speakes will discuss timely subjects affecting all phases of the agricultural industry Tuesday, Wednesday and Thursday. Friday and Saturday will be devoted to field excursions to Hancock and Gettysburg.

SOME RECENT BULLETINS

Reports of Storage Holdings of Certain Food Products During 1918, by John O. Bell. Bulletin 792, U. S. Dept. of Agr., Washington, D. C.

Common Insecticides, their Practical Value, by H. F. Wilson. Bulletin 303, Wisconsin Experiment Station, Madison, Wis.

The Feeding of Hogs, or "The Pork Producing Values of Feeds," Monthly bulletin published by the Missouri State Board of Agriculture, Jefferson City, Mo.

White Diarrhoea of Fowls, by A. W. Richardson. Extension Circular 42, New Hampshire Experiment Station, Durham, N. H.

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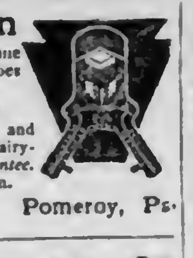

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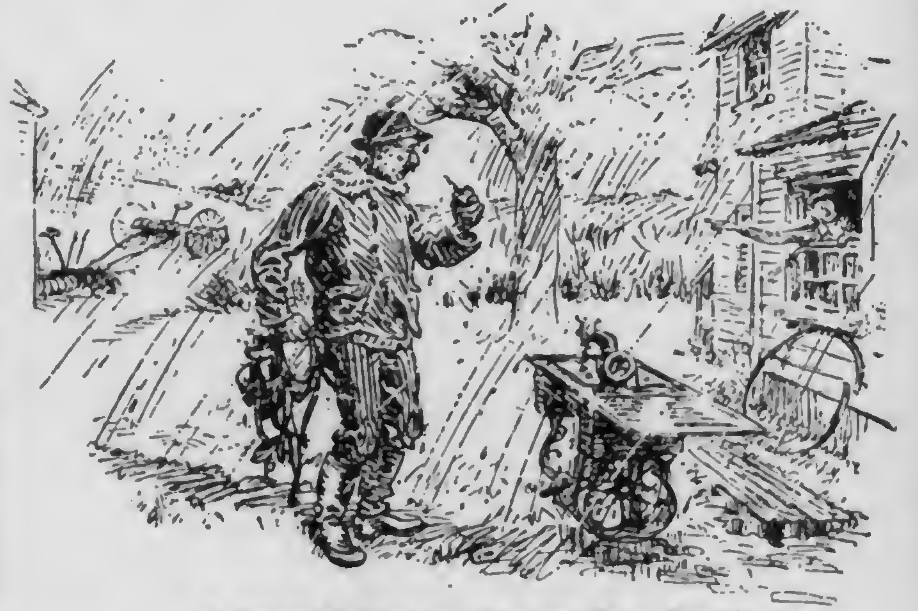
MAKERS OF JUNK

Every farmer knows that he is wasting money, stealing from himself, decreasing profits and injuring his standing in the community when he leaves his farm machinery and implements out in the weather. Every farmer knows all of this, and yet a drive thru any farming community will reveal machinery checking and scorching in the sun, or rusting and rotting in the rain. The individual loss looks small. It is only as this waste is calculated in terms of thousands of farms that the loss to each is appreciated.

It is estimated that the loss thru neglect of machinery on all of the farms of the country is close to a hundred million dollars. Pennsylvania and New York each have more than 200,000 farms. New York State is rated as using $83,644,822 worth of implements. Pennsylvania has more than $50,000,000 invested in farm machinery. This is crediting only about $250 worth of machinery to Pennsylvania farms and about $400 to each New York farm. But there is a loss of about $50 per farm in needless weathering damage to this machinery. There is the damage to the implement itself: shortened life and wasted investment. There is the lessened efficinecy in the use of the machine—loss of both time and effectiveness thru trying to get along with damaged implements. There is the unmeasurable loss in appearance of the farm with machinery standing out in the weather and things going to waste.



A Powerful Hint on Housing Farm Machinery

This is how it figures out. With proper care a farm implement can be made to last fifteen or twenty years—often longer. Take for proof the case of C. S. Johnson, a farmer of Elmora, Indiana. He writes that he has used his plow every season for thirty-five years. It's a safe bet that he knows the value of taking care of the machinery he makes his living with.

Now consider the other side of the question—the neglect side. How long would Mr. Johnson's plow have lasted if he left it in the field he was last plowing whenever he got thru with it? Perhaps four or five years. By that time it would have rusted and checked and rotted beyond the point of usefulness.

That is precisely what happens hundreds of times a year. The farmer neglects his tools. In a few years they go into the discard. Pretty soon up drives the junk man and off goes the plow, or rake or whatever it may be—a sad monument of neglect as it rattles disconsolately down the road in the junk man's cart.

Here are four suggestions for stopping this waste in junking farm implements before their appointed period of usefulness has run its course:

1.—Paint every farm implement after every season's use.

2.—Protect all bright metal parts with heavy grease.

3.—Keep all implements under cover.

4.—Keep a supply of spare parts on hand and keep every implement in repair.

If the average life of Pennsylvania's seventy million dollars' worth of farm machinery is ten years, and by proper care the Pennsylvania farmers could raise that average just one year, the saving in depreciation would be nearly a million dollars a year. A million dollars is worth pocketing, and every farmer might have some of it.

LAWS RELATING TO FUR BEARING ANIMALS 1919

New York

Open Seasons.—Mink and sable November 10 to March 15; raccoon may be taken otherwise than by trapping in the Catskill Park, October 1 to March 15; raccoon, elsewhere in State, November 10 to February 10; skunk, November 10 to February 10; muskrat, November 10 to April 20. No open season for beaver.

Trapping.—License required for hunting or trapping; fee, resident, $1.10; nonresident, $10. Muskrat houses may not be molested, injured, or disturbed, nor the animals shot at any time. Skunks may not be taken by the aid of dogs or by digging out or driving them from dens or holes by smoking or the use of chemicals; if injuring property, they may be taken at any time and in any manner, but the skins of animals so taken shall not be possessed, sold, bought, or trafficked in. Unlawful to set traps during close season.

Propagation.—All protected fur animals may be kept alive in captivity for propagation and sale, provided a license be obtained from the conservation commission (fee, $5.) No fur-bearing animals may be kept which are taken wild during close season for such animals (unless taken under license); nor may they be disposed of during close season. The conservation commission is authorized to issue license to capture animals for propagation; fee for permit, $1.

Bounties.—Panther, $20, paid by state; none paid since May, 1884.

Raccoons may now be taken in Catskill Park from October 1 to March 15 in any manner except by trapping, and they may be taken in the rest of the state from November 10 to February 10 in any manner. Skunks may not be hunted, pursued, or killed by aid of dogs.

Swine

September litters. Thoroughbred stock, Orion Cherry King; Orion Defender; Taxpayer; Top Col., etc. Registered sow, fall farrowing $75. Write for free copy subscription magazine and free book, "How to Raise Hogs."
"THE RED HOG" ENFIELD-DRAKESIDE FARMS
Louis L. Drake, Owner. Delaware, N. J.

Fashion Herd of Big Type Poland Chinas
Spring boars ready for service, fit to head well-bred herds, sired by Giant Smooth Wonder and Ohio King 2nd, out of 700 and 800 lb. sows. Also grand lot Fall pigs, same breeding. Booking orders for Nov. delivery. Prices on app. C. S. Eppley, Zanesville, O.

REGISTERED DUROC-JERSEY PIGS
$10 each while they last, all from imported Southern stock, none better. Bargains in bred gilts, service boars, brood sows and spring pigs. C. W. Ellis, Jr., Maple Lawn Farm, Cortland, N. Y.

Oakhurst Farm Ayrshires present offering—20 young cows of the choicest strains, bred to freshen this winter and spring in calf to a high-class bull.
GUY D. POWER & SON, Auburn, N. Y.

TARRYMOOR BERKSHIRES
Quality Growthiness Prolificacy
We guarantee satisfaction.
Robt. E. Atkinson, Wrightstown, Pa. Bell Phone.

REG. O. I. C.'S ALL AGES. Booking orders for September, October and November Pigs. BLACK DIAMOND MINORCA FARM, MT. BETHEL, PA.

DUROC JERSEY MARCH SERVICE BOARS, July pigs, Colonial and Orion Cherry King breeding. Prices right. GEO. W. CRIM, Uhrichsville, Ohio.

REGISTERED O. I. C. Herd Boar for sale, sure breeder. Also booking orders for Aug. and Sept. Pigs. BENJ. H. RUTLEDGE, Honesdale, Pa. R. 3.

Chester Whites Boar and Sow Pigs. Bred Sows. Collie dogs.
ARCADIA FARM. BOX D, BALLY, PA.

CHESTER WHITE PIGS. None better. Eligible to registry. Write your wants. PENNCROFT FARM, CHAS. H. DARLINGTON, Phoenixville, Pa.

Berkshire Pigs Very best of breeding. Eight wks. old pigs, either sex, $12 each, inc. registry. R. S. GOOD, Peach Bottom, Pa.

Service Boars. Several fine animals of the home-market and home-table breed, the Cheshire. Also 2 early Sept. litters of pigs. Morningside Farm, Sylvania, Pa.

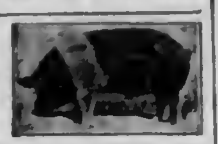
Registered O. I. C. Pigs 8 to 8 weeks old, good type, heavy bone. BRUBAKER BROS., STAR R., COCOLAMUS, PA.

Duroc Jersey Pigs Orion & Col. strains, 2 to 8 months old.
CHAS. E. ECROYD. Sunnyside Farm, Muncy, Pa.

BIG TYPE POLAND CHINAS—Boars and sows, 4 months old. Taking orders for Fall pigs. Prices reasonable. C. E. SECHLER, Markelton, Pa.

MALVERN STOCK FARM
MALVERN, PA.
Breeders of pure bred Berkshires of the best blood lines. Fifteen well grown spring boars for sale, prices reasonable. Correspondence solicited.

CRANDELL'S BIG TYPE O. I. C.'S
The World's Grand Champion herd, winning twice as many first prizes at the National O. I. C. Show as all other breeders put together, Calloway Edd being the Grand Champion boar. Also our herd has been undefeated at all the big fairs for the past two years. Stock of all ages for sale. Get our catalog. Crandell's Prize Hogs, Cass City, Mich.



HAMPSHIRES
The fast growing bacon hog. Pigs any age, bred gilts, free circular. LOCUST LAWN FARM, Bird-in-Hand, Box 2, Lanc. Co., Pa.

Fine O. I. C. Pigs for sale, eligible to registry, six weeks old. Price $5 each.
THE OAKS DAIRY FARM, WYALUSING, PA.

DUROC PIGS Bred for size and quality, 6 to 10 weeks old, $15 each.
H. ED. BARCLAY, R D. No. 4, Somerset, Pa.

BERKSHIRES AND CHESTER WHITES All ages, for sale; write your wants; we can please you.
TWIN BROOK FARM. NEWVILLE, PA.

Durocs, all im. Yearling and Fall yearling boar and Fall boars. Fall gilts, bred for Aug., Sept. and Oct. Spring pigs, e. sex. I. D. Jackson, R. 10, V. Wert, O.

Large Berkshire Swine Registered High Grade. Prices reasonable. Write
HOME FARM. CENTER VALLEY, PA.

Reg. O. I. C. and C. W. Pigs, Bred gilts and sows Satisfaction and safe delivery guaranteed.
JOHN L. VAN HORN, TROY, PA.

Registered O. I. C. Pigs For Sale Good stock and prices reasonable. L. D. LAUSHEY, Smoketown, Lanc. Co., Pa.

Duroc-Jersey Fall Pigs at farmers' prices. Pedigreed and best of blood lines.
SLATY RIDGE FARM, Box 5, Palmyra, Pa.

REG. BERKSHIRE PIGS for sale. Sept., Oct. and November prices right. 4 gilts open; nice ones 100 to 140 pounds. W. J. McCONNELL, OXFORD, PA

REGISTERED BERKSHIRE PIGS. Five litters to choose from Six weeks old pigs $13 each.
L. C. TOMKINS, Ellenton, Lyc. Co., Pa.

Big Type Polands, ALL AGES. Write your wants.
W. C. KEYSOR, GREENWICH, O., R. D 2

DUROCS and P. C. PIGS $30 Pair
Pedigree. Not akin. S. O. WEEKS, DeGraff, Ohio.

Veterinary

Conducted by W. C. Fair, V. S.

Advice thru this department is free to our subscribers. Each communication should state history and symptoms of the case in full; also the name and address of writer. Initials only will be published. We cannot make reply by mail. This is one of the most valuable columns of the paper and we invite readers to make use of it. Clippings from this column, when properly preserved and classified, make one of the most valuable medical symposiums a farmer-stockman can obtain.

Indigestion.—Have 4 young pigs that are gradually growing thin, they breathe with some difficulty, appetite almost gone, when walking their body sways. I am told they have thumps, if so, what can be done for them? M. P., Dover, Del.—Give each pig a full dose of castor oil, follow that with the following: give bicarbonate of soda to pigs 3 times a day. For a pig weighing 100 lbs. give 30 grains, also give some powdered wood charcoal in every feed.

Enlarged Throat and Neck.—I have been a reader of the Pennsylvania Farmer for 2 years and find some valuable information in the veterinary column. I have a cow that has a lump on each side of her neck, but much more swelling on one side, extending down neck quite a ways. This thickening of the throat and neck has been going on for some 18 months, and is gradually increasing in size. She is a nice cow and I would like to sell her after she comes fresh, which will be in the early part of December. A. H., Hydes, Md.—Give her thirty grains potassium iodide in feed or in drinking water daily, and rub swelling by hand twice a day. Once daily apply one part iodine and nine parts fresh lard. It is possible that a cold abscess is slowly forming. If bunch softens, open into it and you will perhaps find pus

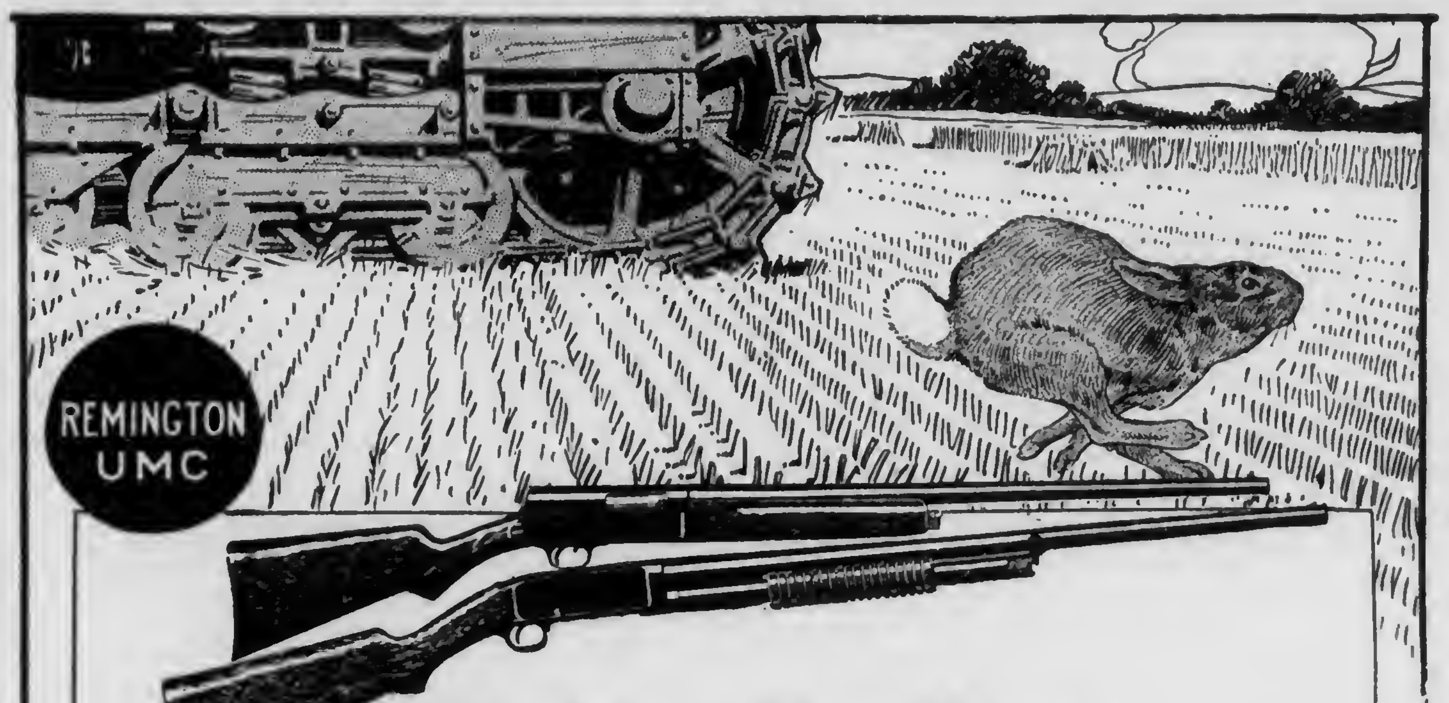
Cow Caught Cold.—One of my cows seems to be suffering from cold in the head, result of being out too long in cold rain storm. She coughs some, discharges mucus from nose, has good appetite and gives good mess of milk. I. B., West Point Pleasant, N. J.—Give her a tablespoonful bicarbonate of soda, a tablespoonful powdered gentian and a tablespoonful powdered licorice in feed 3 times a day.

Cow Drinks Her Own Urine.—I would like to know what can be done to prevent a cow from drinking her own urine. W. E. S., Port Republic, N. J.—Doubtless she has a depraved appetite and is in need of more salt, for a while at least. Give her a tablespoonful powdered gentian in each feed. A change of feed will benefit her.

Heifer Milks From 5 Teats.—I have a heifer 20 months old which recently calved, since then I notice milk comes from a fifth teat. What can be done to close this fifth teat? I have been advised to slit this small teat, then it will perhaps close. May I see your advice in the paper soon? J. W., Cessna, Pa.—Either leave it alone until she goes dry, or slit teat and paint raw edges with tincture of iodine daily. Also apply equal parts boric acid and oxide of zinc twice daily.

Bloody Milk.—Infected Udder.—I have a 3-year-old cow that has been giving bloody milk for some time, but lately the milk is stringy. I might say that only one quarter seems to be affected, but the quarter is painless. C. W. W., Columbia Cross Roads, Pa.—Apply one part tincture of iodine and 3 parts camphorated oil to diseased quarter once a day, give her a teaspoonful hyposulphite of soda at dose in feed daily. Are you sure she does not bruise her udder, or do other cattle hook her. If she is stabled, give her plenty bedding.

Chronic Cough.—Several of my cows have been troubled with a cough all summer. I have thought it might be contagious, as I have a calf 6 months old which is commencing to cough. F. B., Mahaffey, Pa.—Doubtless the same exciting cause has produced the coughing that you refer to. Mix equal parts turpentine, aqua ammonia and raw linseed oil, and apply to their throat 3 or 4 times a week. Mix equal parts ginger, powdered nitrate of potash and powdered licorice together and give each one of your cows a tablespoonful at a dose in feed twice daily. This ailment is not contagious.



Nothing Can Beat Improvement

LIKE THE fabled tortoise that outran the hare, persistent improvement in any service is bound to win—"Good enough" develops speed, but somehow never keeps going. And here you have one of the main reasons why Remington UMC modern guns and ammunition are so popular.

Remington UMC has contributed more improvements to the development of shooting than any other manufacturer. The most recent of them is the wonderful Wetproof process by which shot shells are for the first time made completely waterproof in body, crimp and top wad.

The hardest rain, the longest ducking, the worst of storage, can not affect the perfect shooting of the shot shells you buy if they are Remington UMC Wetproof—"Arrow" or "Nitro Club" loaded with smokeless or "New Club" with black powder.

They will not swell up, scuff, wilt at the crimp and jam. Instead, they will work through your modern Remington UMC autoloading or pump gun as perfectly as if taken direct from the loading machine. And fire just as surely and with the same always superior Remington UMC speed, pattern and penetration.

There are more than 82,700 leading sporting goods and hardware dealers in the United States who sell Remington UMC. That also means best service to shooters.

For Sale In Your Nearest Town

Use Rem Oil to clean and oil your gun, the best combination Powder Solvent, Lubricant and Rust Preventive.

Remington UMC for Shooting Right

THE REMINGTON ARMS UNION METALLIC CARTRIDGE COMPANY, Inc.
Largest Manufacturers of Firearms and Ammunition in the World
WOOLWORTH BUILDING NEW YORK

Dairy

GUERNSEYS
196 368
These figures represent the average butter fat production of a grade herd in Minnesota before and after the use of a pure bred Guernsey bull. The improved herd brought the owner prosperity,—the original, only drudgery. Write to breeders for descriptions and prices and send for our free booklet. "The Grade Guernsey."
The American Guernsey Cattle Club
Box M 35, Peterboro, N. H.
QUALITY ECONOMY QUANTITY

MAPLE LAWN HOLSTEINS
BEST in High grades and Registered Holsteins. Elegant high grade calves $25 each. With ten calves will give choice registered bull free. Will accept Liberty Bonds and W. S. S. at par. Guarantee safe arrival and gladly ship C. O. D. Write your wants. C. W. ELLIS, JR., Cortland, N. Y.

Penncroft Saul, Reg. Jersey, dropped July 14, 1919. His daughters will excel their dams each year by more than his price. Don't buy other men's culls; raise better cows from your own best. Pedigree and price on application.
CHARLES H. DARLINGTON, Phoenixville, Pa.

Registered Holstein and Guernsey bulls from calves to serviceable age. 250 animals in the herd. BONNYMEADS FARMS, R. D. 1, Harrisburg, Pa.

STEVENS' HOLSTEIN FARM
OF CORTLAND, N. Y.
King Korndyke Sadie Vale Jr., No. 20391, two nearest dams averaging 36 pounds of butter in 7 days, heads my herd. Butter records from 17 pounds two-year-olds to 34 pounds at full age. Also high grade Holstein calves, either sex, $15.00 each. Write your wants. PAUL H. STEVENS, Prop.

Holstein Bulls Ready For Service
Two are coming two years old, one three years. Better see these bulls; see the size and milking ability of dams and the remarkable calves the older one is getting. They have been raised under ideal conditions and are priced right. PLUMLYN FARM, Fairview Village (near Norristown), Pa.

Holstein Heifer Calves By pure bred sire and high-grade big producing cows. Beautifully marked. Splendid individuals, $20 up. Browncroft Farms, McGraw, N. Y.

HIGH GRADE HOLSTEIN CALVES. Either sex. Shipped anywhere. Write for prices. Satisfaction and safe delivery guaranteed. FRANK GAMEL, PINE GROVE FARM, LOCKE, N. Y.

HOLSTEIN BULLS Nearly ready for service. With all papers, $75 to $100. B. Smith & Son, Granville Summit, Pa.

Polled Holsteins registered with the horned ones, only naturally hornless. Catalogue for stamp. GEORGE E. STEVENSON & SONS, Clarks Summit, Pa.

Milking Shorthorns Bull Calves sired by Glenside Royal Stamp for sale.
C. M. KENNEDY & SONS, Ulster, Bradford Co., Pa.

Ayrshire Bull Calves From high record A. R. Dams
ROBERT TEMPLETON & SON, ULSTER, PA.

Registered Holstein Friesian Cattle Sons of the great Finderne Sir Valdessa, a 37 lb. bull, for sale.
MILLARD E. BASEHOAR, Littlestown, Pa.

400 Cortland County Cows For Sale 400

110 Fresh cows. Try a load of these if you want milk.
150 Cows due to calve this month and next. Good size and the best dairy type you ever saw.
70 Registered cows, fresh and due to calve soon.
10 Registered Bulls, with a lot of good breeding.
60 Heifers. They are extra high grades. Mostly due to calve this spring.

CORTLAND HOLSTEIN FARMS
Department OA, 203-205 Savings Bank Building
Bell Phone 534 CORTLAND, N. Y.

SPOT FARM
HOLSTEINS
⅞ Holstein heifer calves $20 to $25 each express paid in lots of 5. 20 registered heifer calves. Registered bulls all ages. 25 close springer registered cows. 50 high grade yearling heifers and bulls $55 each. High grade 2-yr.-olds and close springer cows. Come to sale Oct. 14. Close to winter and must sell.
J. C. Reagan, Tully, N. Y.

WE WILL GIVE THE USE OF A
Finely Bred Reg. Holstein Bull Calf
for three years to any responsible farmer who wishes to improve his herd. Nugget Hill Farm, Charlton, Mass.

REGISTERED HOLSTEIN CALVES are all sold. Will offer you some more a little later.
WALTER M. CRUTTENDEN, Wilkes-Barre, Pa.

Miscellaneous

PENNS VALLEY STOCK FARM
Percherons, Berkshires, Holsteins
"Young Service Boars, pigs either sex."
W. F. BISHEL, CENTRE HALL, PA.

Chester White Hogs, All Ages
Shorthorn Bulls. R. L. MUNCE, Canonsburg, Pa.

WANTED Nuts (all kinds), calves, poultry, fancy eggs and Hot House lambs.
WM. H. COHEN & CO.
232 Washington Street, New York City.

Near-By Stock Farm Offers Reg. Ayrshire cattle; Reg. Berkshire pigs, all ages; White Wyandottes, all the most popular blood lines. J. A. McMAHAN, Pottsgrove, Pa.

Ayrshires, Percherons and Berkshires
We have what you want.
Crestmont Farm, Sunbury, Pa.

For Sale: Registered C. W. gilts and serviceable boars and pigs. Also Jersey Bulls, all ages. J. A. BOAK, NEW CASTLE, PA R. 1.

Don't send a cent!

Order From This Advertisement

H. C. Phelps
You or your neighbors know me. I have warm friends all over the United States made by my Square Deal in the Split Hickory Vehicle business.

I'll Put This Magnificent $150.00 MASTERTONE Phonograph in Your Home—I'll Send You a Selection of Fine Records to Play It With—All Without One Cent Down. You Satisfy Yourself

I'm Making This Free Offer

—to the honest, substantial folks, like the hundreds of thousands that have bought my fine buggies and carriages in the last 20 years. *I'll trust you to the limit*—for I know that you do business on good faith, just as I do. I went into the phonograph business some years ago because I believed there was a way to put the biggest, finest phonographs in your homes—*at half or less than half the prices charged for such machines.*

Now my plan is ready for you. It beats anything I have ever done or anything anybody else has ever done with a *real phonograph*. First you get it in your home to try absolutely free. Then you send me the low price only because you are perfectly satisfied—because you would not part with the MASTERTONE. Or, if you are not satisfied I'll take it back, and you keep your money.

You Simply Fill Out and Mail the Coupon

Send no money—no pay of any kind. Back comes the MASTERTONE and with it six fine *record selections* to play.

It is one of the three greatest phonographs in the world. Experts say the MASTERTONE reproduces the human voice, the piano, the violin, the music of famous bands with clearness, sweetness and naturalness all its own. You'll notice the freedom from roughness when you compare it with others.

You use the phonograph and the records as your own for ten days. Play it for your family, your neighbors, your friends. Take a vote of the whole family on it—and if you don't say it is as fine as any phonograph costing twice as much—if you want to part with it for any reason—I'll take the phonograph and the records back and you won't be out one cent of the purchase price.

Big, Beautiful Cabinet in Mahogany or Walnut

You have your choice of either Black Walnut or Mahogany finish. My royal MASTERTONE has a big artistic cabinet—48 inches high, 20 inches wide, 23½ inches deep—*the latest art style*—as beautiful as any you ever saw at any price. Make your choice—fill out the coupon—answer all the questions satisfactorily—do it today. I'll send the MASTERTONE to you *at once.*

Hear it and you will know why I am so willing to put it in your home without any money down—why I am willing to send it to you with six fine record selections—so you and your family and your friends can appreciate its real value at first hand.

Mastertone

You Try My MASTERTONE In Your Home Ten Days. If You Want to Keep It Send Me Only . . . .

$79.50

How can I sell it at that price—half or less than half what such phonographs cost? *Simply by selling direct to you*—by having no expensive connections — no high-priced sales methods. This advertisement is my only salesman. At my one small profit my MASTERTONE makes many sales, because every one of your friends will want a MASTERTONE when they hear it, and see how much better it is than the ordinary.

I send you my written absolute Guarantee of my MASTERTONE. I can not begin to describe its superior mechanism—the 29 ways in which it excels other phonographs. You have to *hear* the MASTERTONE Reproducer—the greatest advance in phonographic improvement—with genuine imported India mica diaphragm. You have to hear its Patent Tone Modulator. You have to *enjoy* the records played by the MASTERTONE'S velvety, silent motor.

My MASTERTONE plays 4 to 6 records at one winding. Automatic Stop stops the machine at end of record.

Now—fill out the coupon today. Don't delay—for I want you to get the MASTERTONE as soon as possible. The first in each neighborhood will be the fortunate ones—for there will be a rush to take advantage of my offer. This is the first time I have ever published it.

Height 48 inches
Width 20 inches
Depth 23 1-2 inches

PLAYS ALL RECORDS

Whether You Order My MASTERTONE or Not, Get My Free Song Book

Write for the MASTERTONE Book whether you order or not. Your name and address on a post card will bring you full description and illustration of the phonograph in colors. I will also send you *FREE* my Book of Old Favorite Songs—the old-time melodies that everybody loves—50 famous songs—words and music. Write today.

H. C. Phelps, President, THE PHELPS FACTORIES, Dept. 103, Columbus, Ohio

The Phelps Factories, Dept. 103, Columbus, Ohio

Gentlemen: You may send me one MASTERTONE Phonograph in................................finish (you have choice of Walnut or Satin Finish Mahogany) on your ten days' free trial offer. I agree to pay the transportation charges and if after ten days' trial I find it perfectly satisfactory in every respect, I agree to send you $79.50 in full payment within ten days from receipt of Phonograph. It is understood that this does not place me under any obligation to keep the Phonograph. If for any reason I am not satisfied with it and do not want to keep it, I agree to return it at your expense. It is understood that the Phonograb remains your property until I pay for in full.

Name..Town..

State..St. No. or R. F. D...

Do you own property? If so give description and name of bank or any one else you desire to give as reference. Give complete description of property and names of references on separate sheet of paper.

Shall we ship by freight or express?.......................................

NOTE: We recommend that you have Phonograph shipped by express to insure its reaching you promptly

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PENNSYLVANIA
AGRICULTURE
THE KEYSTONE OF
NATIONAL PROSPERITY
FARMER
ESTABLISHED 1880
PUBLISHED WEEKLY

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Volume 46 PHILADELPHIA, PA., SATURDAY NOVEMBER 1, 1919. Number 18

Two big money saving investments for the farm

A cream separator that gets all the cream

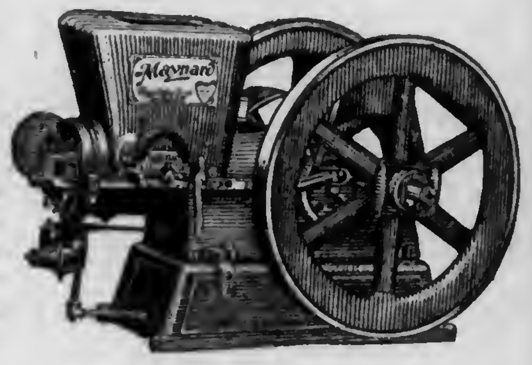
HERE is a cream separator that is positively guaranteed to skim to one-thousandth of one per-cent. The skimming device is cleverly designed to skim every drop of milk eight separate times. By the time the milk reaches the skimmed milk outlet, every trace of cream has been wrung from it.

The Maynard cream separator, shown here, with its new, improved, rustless, light-running aluminum bowl and its other exclusive, patented features, is only one of several remarkable cream separator values found on pages 868 to 871 of the new fall catalog of the Charles William Stores.

A gas engine that is sold on sixty days' trial

THIS Maynard gas engine is always ready to do a hard day's work on either kerosene or gasoline. Considering its high quality, it is the lowest priced engine on the market.

Maynard engines, moreover, are built to satisfy that large class of engine buyers who are as greatly interested in the performance of an engine as they are in its price. If you belong to that class you will be interested in turning to pages 872 to 879 of the new Charles William catalog where various types of Maynard engines are described in detail.



This Maynard Heater for solid winter comfort

The Maynard Torrid Hot Blast Heater assures plenty of warmth at little expense.

It has the reversible smoke pipe collar. Pipe can go straight in at the back or at the top.

Test your heater thoroughly and should it fail to fulfill any of our claims, return it at our expense.

You will find Maynard Heaters described in detail on pages 857 and 858 of the Big Book.

Shipped from your nearest point, Chattanooga, Tenn., or New York City.

Made in four different sizes ranging from $11.98 to $20.90.

SPECIAL! Free book of wall paper bargains

We are selling out a number of beautiful wall papers for all rooms at amazingly low prices. With prices going up, it will pay you to put in a supply whether you paper now or in the Spring. Send at once for this *free* wall paper book of 98 actual samples. Address The Charles William Stores, 561 Stores Bldg., Dept. W, New York City.

Where a dollar spent is a dollar well invested

A prosperous farmer in up-state New York well described the big Charles William catalog when he called it his bible of bargains.

You should read your copy thoroughly to appreciate the money you can save by buying direct from the great Charles William Stores in New York.

Every bit of merchandise that we sell comes to our great store direct from the factory and goes direct from our store to you.

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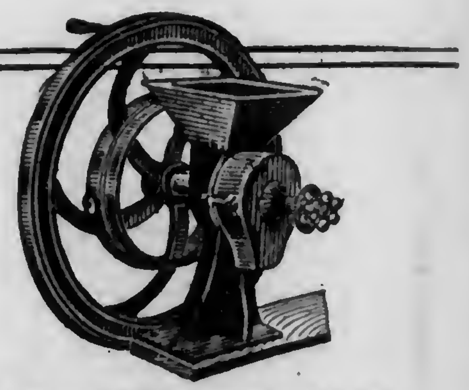

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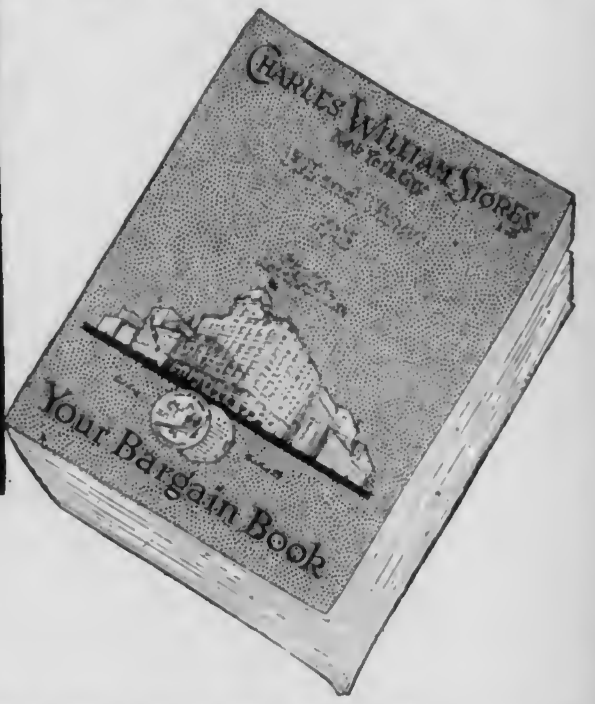

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VOCATIONAL SCHOOL WORK

An Institution That is Going to Help Keep the Boys on the Farm

By SYLVAN D. EINSTEIN

CAPE MAY COUNTY, N. J.

A Farmer in the Making in Vocational School Project

The federal law establishing Vocational Schools was passed February 23, 1917. A specific requirement under that law is that the controlling purpose of the education is to fit for useful employment. To my mind this is the beginning of real useful education. It is the finest thought ever written into an educational law. It is the essence of the whole act.

How much of our present-day education leads directly to useful employment? The nearest the majority of our rural high schools come to teachings for useful employment is in giving a commercial course. The nearest your boy, whom you would like to have stay on the farm, gets to an education which will fit him for a useful employment is a course fitting him for a city office as a bookkeeper. Here is the first place to start improvement of educational machinery. It is going to help solve the farm help problem. What finer help does the farmer want than that of his son trained in a high school with a Vocational course in agriculture? The boy will be able to develop leadership because he has studied the principles of our modern-day farm practice. He will be trained for useful employment and able to take the farm when you feel you have done your share, and guide it on to even greater success.

The law further provides that education shall be less than college grade. That education is designed to meet the needs of persons over 14 years of age who have entered upon or are preparing to enter upon the works of the farm or the farm home. Such schools shall provide for directed, or supervised practice in agriculture, either on a farm provided for by the school or other farm (in most cases the home farm) for at least six months of the year. This means that the student is required to put into practice the principles learned in the classes and that practice of these ideas be supervised by the instructor for six months out of the year. This work is known as home project, and is intended to be carried out as a regular part of the farm work. It is not experimentation. The student always bears in mind the necessity of making his project pay, where the work is a production project.

One-half the teacher's salary is paid by the federal government, one-fourth by the state and only one-fourth by the county or local authorities. If you would employ a Vocational teacher in your township and you pay him $1400 per year, the government will pay $700 towards it, the state $350, and all the local people have to pay is $350.

Our first and hardest job in Cape May County was to get the boys to believe in the farm. We had to get our boys into a mood where they thought there was a good living to be made on the farm—a chance to have the home of homes. We had to create confidence. We accomplished this by taking the boys on visits to the best farms in the county and surrounding counties. We tried to visit farms with the same soil types, or worse, so that the boys could make a comparison with their soil at home, thereby removing any doubt as to what success they might have in reference to soil. The owners of the farms we visited told the boys how they started, and in most cases they were small beginnings. They showed and explained their methods. They told what their incomes were, how successful they had been and did everything to encourage the boys to stay on the farm. We had successful farmers and are having them come down and direct their talks especially to the boys, giving the entire history of their careers.

The results of these visits have exceeded our expectation. It is possible for me to take one to a dozen boys living on one road all in a stretch of about five miles who will answer proudly that they expect to become farmers when asked as to their profession. These boys are from 14 to 18 years of age. Ask them the reason why they want to be farmers, as was done at the local grange meeting, and the answer is, "I have seen what can be done on a farm." We have many boys who have decided in the same way.

Every Project is Expected to Pay

Haven't we struck on the one thing that will turn the tide in keeping the boys at home? The national and state governments have appropriated millions of dollars to try to check this rotting of the nation's foundation—the decline in its agricultural population. Many modern agencies have done wonderfully good work, but still they haven't checked the flow from the farm to the cities. One of the most vital factors in checking this leak lies in the newly formed vocational schools. These schools have become the big brothers of our young men. They have defended agriculture, not by telling beautiful stories about the farm, not in a sentimental way, but with hard cold facts presented primarily by those who have succeeded in farming.

Our Cape May County boys and young men are studying fruit growing, potato, sweet potato, tomato, early and late corn and alfalfa growing, poultry and hog raising and soil improvement. All the principles learned in the classes must be carried out by applying them in a practical manner on the home farm, under the supervision of the vocational school. To make a financial gain is one of the chief aims of the project; some of these projects help to make the students partially self supporting. One of our young men captured

(Continued on Page 11.)

Vocational School Student Renovating the Old Family Orchard

Installing a Farm Water System—II

A Discussion of The Equipment, Plumbing and Arrangement Necessary in the House

By WILLIAM C. TUCKER

SANITARY ENGINEER

The proposed plumbing work in the house, be it new or addition or alteration to that already in place, must be given thought and study. The problem of material to be selected, make of fixture to be chosen, and expense outlay, must be carefully pondered, and final decisions and adjustments must be well balanced. The writer has seen so many serious and stupid blunders committed, and money wasted, all of which could have been avoided, had less haste and more mature deliberation been followed. There should be few if any mistakes made in the plumbing installation, the main portion of which, of necessity, has to be placed either in walls, back of the plaster, or under the finished flooring; to rectify error in design or faulty construction to which, would cause great inconvenience and expense. The plumbing must be simple and run as direct as possible, with few bends and off-sets, which not only add to the cost but greatly to the confusion of tracing the work after completion, and it has been covered, and greater difficulty in making additions where desired.

The designing of the plumbing work must be carefully studied; that for the drainage is governed by the rules and regulations of the local municipality. The size of the supply pipes to deliver an assured quantity of water at all times must be accurately determined, for with age the efficiency reduces very rapidly, so that all calculations must be made on a liberal basis. All pipes must be concealed as much as possible, with the exception of short branches at fixtures. They may be run in partitions, but where possible should be placed in closets and not covered. All piping should be inspected and tested after completion and before covering. The water pipes must be kept away from outside walls to prevent freezing. It is most important to know definitey where the pipes are to be run, particularly in new work, so that there may be as little cutting and damage to plaster as possible, the beams must not be excessively notched, or unavoidable headers must be constructed, and beams reinforced. All valves and important points must be readily accessible, for inspection and repair.

The make, location, and setting of the fixtures is important; the variety to select from is wide and often confusing. All fixtures should be set so that space about them may be readily cleaned. Basins and sinks should be supported upon wall brackets so that floor may be free. The use of polished metal in conjunction with the fixtures should be limited to that not subject to abrasion; all traps, pipes, valves, etc., below should be painted, thus reducing cost, and unsightliness from wear. No fixture should be set in front of a window, if possible, placing the user always in a draft, and making its operation difficult.

The plumbing in the house must be most compact and well centered, it should not ramify. The bath room should be over the kitchen to save needless runs of pipe, thereby greatly reducing cost, and to confine noise from flush of fixtures. In Fig. 1 is shown the first story of a farm house with the plumbing well concentrated. The kitchen is of good size, with equipment well arranged. The laundry on one side and pantry on the other, are both well located. Figure 2 shows the second story with bath room directly over kitchen, the fixtures of which are well placed. The design of the plumbing in this house is most excellent and shows skill and thought, and can be installed at moderate cost. Fig. 3 shows the first story of a farm house with plumbing scattered, and general arrangement not so good; the toilet adjoining office will be appreciated, and would be greatly improved by he addition of a basin. The laundry adjoining the kitchen is well located. The absence of the pantry will be appreciated, and is a serious omission. Fig. 4 shows the second story with bath room poorly placed and remote from kitchen, necessitating separate soil riser and long and complicated supply pipes; the discharge from fixtures will be plainly heard. This poor arrangement will add very greatly to the cost of the plumbing work; the bath room should have been located over the kitchen, as in Fig. 2.

The kitchen in the house of the farmer is generally the center of the household activities. It is the source in which is prepared the food for the table, also the preservation of the products of fruit, vegetables and meats for future use. It is the sanctum sanctorum of the housewife; it is her domain. Its savory and appetizing fragrance are ever a sense of happiness to the tired worker as he returns from the fields after the heat and dust of the day.

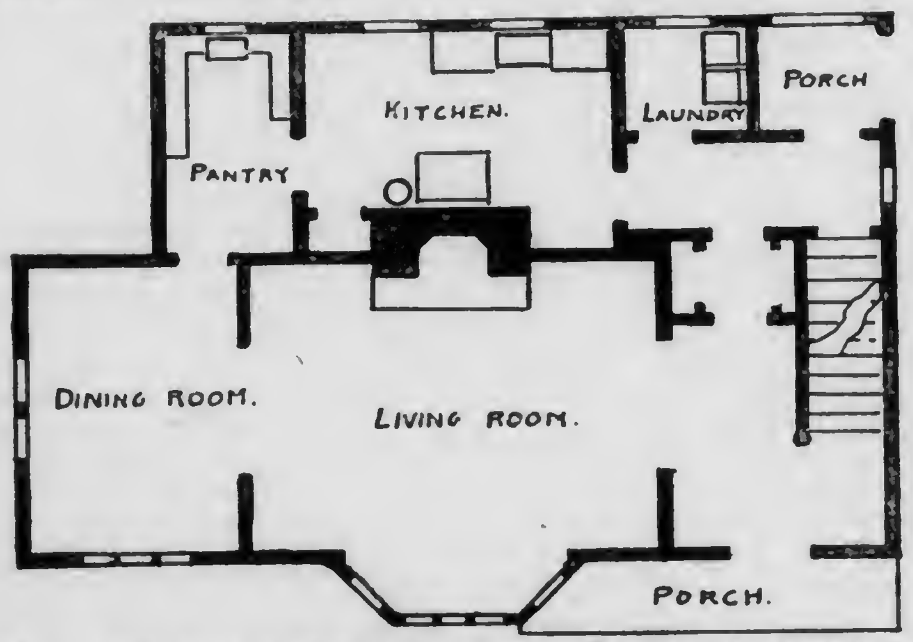

Fig. 1. First Story of Farm House, Showing Excellent Arrangement of Kitchen, Pantry, and Laundry

The room should face generally south, and if possible, in the direction of the farm buildings so that all activities in that center may be easily followed. It must be large and commodious, and cheerful and bright. Its design and equipment must be carefully studied. It must readily co-ordinate with the other functions of the house. The proper treatment of the floors, walls and ceiling cannot be overlooked; the location of the windows and doors must not be forgotten.

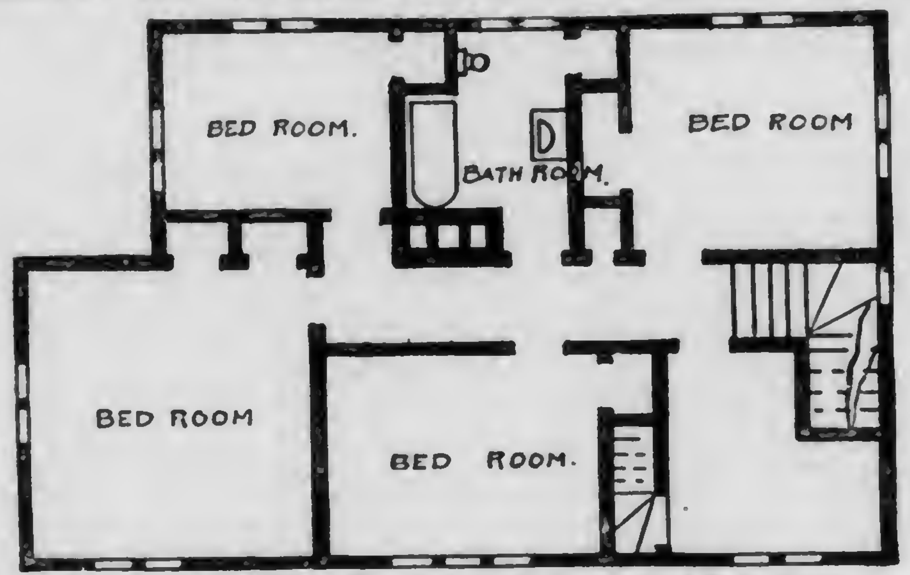

Fig. 2. Second Story Showing Good Location of Bath Room

The functions of the kitchen in the average farm house are most diverse and varied, and it often accommodates mechanical equipment which should be placed elsewhere.

The plumbing in the kitchen is of the utmost importance, and should be given most thoro consideration. The location and arrangement of its equipment must coordinate with that of the house to secure the best results with the least amount of effort and to avoid needless steps. The range should be of suitable size, well built, with large ovens and fire box of appropriate size to meet readily all demands.

All houses should be provided with running hot and cold water. The designing of the cold water system is rather simple, but that for the hot water requires careful study, and the consideration of existing and available data. The method of obtaining hot water by dipper from tank forming part of kitchen range must not be considered; it is obsolete and a form of drudgery which is absolutely inexcusable when the modern way is possible. The use of the kitchen boiler as the source of hot water supply is excellent. It is manufactured in a variety of sizes, and principally of two materials: steel and copper. The steel boiler must be galvanized inside and out, constructed of heavy metal well riveted; that of copper must be strong and durable, with seams carefully brazed. They must be tested to double their working pressure before leaving the factory. The cost of the two varies greatly, but the copper boiler will far outlive that of steel, does not rust, and its general cheerful appearance adds greatly to the spirits of the kitchen workers. The boiler may be heated from either of two methods: from the water-back in kitchen range, or from gas heater, should gas be available, or from both. With the latter method the heater must be placed immediately adjoining the boiler to facilitate observation, and not in basement near furnace.

The location of boiler is most important on account of heat thrown off, contributing greatly to the general discomfiture of the workers in warm weather. It should be placed immediately adjoining the range and in some corner of room remote from the general activity if possible. It should be protected by insulation of some good material, carefully applied, protected with duck covering sewn on, and painted with fireproof material. The size of boiler for family use will depend of course upon the number of members in household, number of fixtures to be supplied; in other words, the quantity of hot water required; all of which data must be known. Practical experience after years of observation has shown that a 40 gallon boiler will suffice for the average farm house consisting of five adults and three children, kitchen, laundry and bathroom. Occasions will arise with equipment of this size when excessive demands cannot always be readily met.

The sink for the kitchen, which contributes so greatly to the smooth running of this important apartment, and which has to withstand a great deal of abuse must be selected with due caution. It should be placed adjoining the range so that its use in this conjunction may be most automatic; it must be strong and durable to resist the excessive wear to which it is always subjected. It must be of large size, rolled rim, not less than 20x30 inches, with 12 inch integral back, 1½-inch trap, and waste, and ⅝-inch faucets of good quality. It may be made of either of three important materials, which vary greatly in utility, appearance and cost: porcelain, enameled, and galvanized iron. A sink of this size, of grade B porcelain, is strong, will wear well, is attractive in appearance and will cost about $38. A sink similar in size and fittings of enameled iron will cost about $20; if of gavanized iron similar in all respects to that above, the cost would be about $14. The surface of bottom of the sink of both the porcelain and that of enameled iron should be protected against excessive wear by removable wooden mat.

Every house should contain at least one bath room, which should be located upon the second story near the center, and, if possible, a wash room for general use upon the first story near entrance to save tracking and wear. The room should be of such size that its use may be enjoyed with freedom. It must contain the usual three fixtures, with fair sized closet. The water closet should be placed in corner of room near window; it must be of low down type, vitreous china, deep seal wash down, with syphon jet action; it must be strong, durable and well constructed; the bowl must have a large and deep water area, and be provided with non-soiling, flushing rim; it must be quiet and effective in operation. The flush tank and cover should be of vitreous china, of 9 gallons capacity, with flush valve, integral stop and china operating handle. The cost of such a fixture would be about $30.

The basin for the bathroom, should be a fair size, it is a serious mistake to get it too small. The dimensions must be at least 27x22 inches; it may be either vitreous porcelain, or enameled iron, with integral back and apron, depressed soap dish, fastened with bracket supports to wall, with low down faucets, trap and waste pipe to be of belted brass for paintings. The cost of such a basin in porcelain would be about $40, and $34 if of enameled iron. Its location in the room should be near a window, the position it occupies in figs. 2 and 4 is well chosen.

The bath tub must be large and of good manufacture, 5 feet long, 30 inches wide with 3 inch roll rim, heavily enameled inside, and painted outside on the job, with compression faucets, china name plates on handles, connecting waste and overflow, with chain and rubber stopper. Trap for tub may be of lead, but preferably of iron, set below the floor, with cleanout screw cap at floor level on house side of tape. The bath is made in three principal shapes, which differ from each other only in supporting base. The form with legs will cost about $32; with closed base to floor with finer fitting, $48.

The laundry tubs must be simple and strong; size 30x30 inches, and 26 inches deep, with painted iron legs, compression faucets, brass waste, plug, 1½-inch trap and waste of iron. They may be either of earthenware or natural stone. The use of enameled iron should not be considered on account of its ease of damage. The cost of a set of two in earthenware, grade B, will be about $40. If of stone with lower cost fittings, but standard, cost will be about $24.

The fixtures described are all of excellent make, of good material and most modern in development, and are designed for hard and constant use. Their appearance is attractive, and they will be found to give excellent satisfaction.

HOME TREATMENT SUGGESTION FOR THE AUTO

Every auto owner will sometime have to visit the repairman and give him a job. However skillful the average owner may be, there will be times when it is economy to engage an expert. A friend of mine has a six-cylinder car, driven about 8,000 miles. It appears to be in perfect order and recently made a continuous trip of several thousand miles without a single mishap. Yet he is to turn the car back to the agency station for a general lookover. This is good judgment and may be the means of fore-stalling considerable difficulty later on.

Running to the garage for every little attention needed by the car is both expensive and time consuming. It often happens that what appears like a serious affair would, if occurring on the binder, be tackled at once without thought of calling on the repairman. The gas engine when understood, yields to treatment readily and with the thought of "home treatment" these notes are offered:

Overcoming Squeaks.—Doors that squeak may be remedied by placing a small piece of leather under the body, and by renewing the rubber snubber near the catch.

Repairing Tire Chains.—When the cross pieces of the anti-skid chain break so that the chain strikes against the fender in passing, it is poor practice to wire the broken pieces across the tire, as the wires will quickly wear thru. By wiring under the rim a more permanent repair will be secured.

Battery Lifter.—An admirable lifter for use in raising the battery out of the car may be made by having harness snaps riveted on the ends of a leather strap, an inch wide and a little longer than the battery. When this is snapped into place it makes a convenient handle for moving the battery around.

Skidding.—When you skid, throw out the clutch and turn the front wheels in the same direction in which the car is skidding, while at the same time the driving wheels should be slowed down as quickly as possible. Never make that often fatal mistake of jamming on the brakes as soon as the skid is felt.

Cylinder Head Nuts.—The nuts of the cylinder head should be tightened down occasionally. If the cylinder head is taken off for any reason, in replacing, the part should be tightened up again by screwing down opposite nuts. Each nut should be turned a little, then its opposite should be screwed down somewhat, working around the cylinder head. If one nut is tightened all the way down there is danger of springing the part.

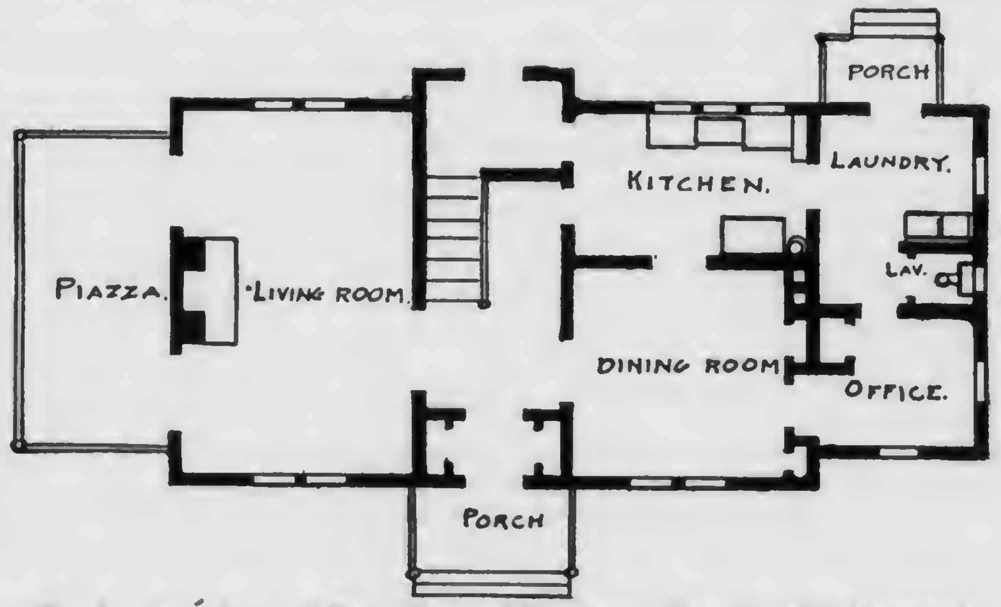

Fig. 3. First Story of Farm House; Kitchen and Laundry Well Arranged

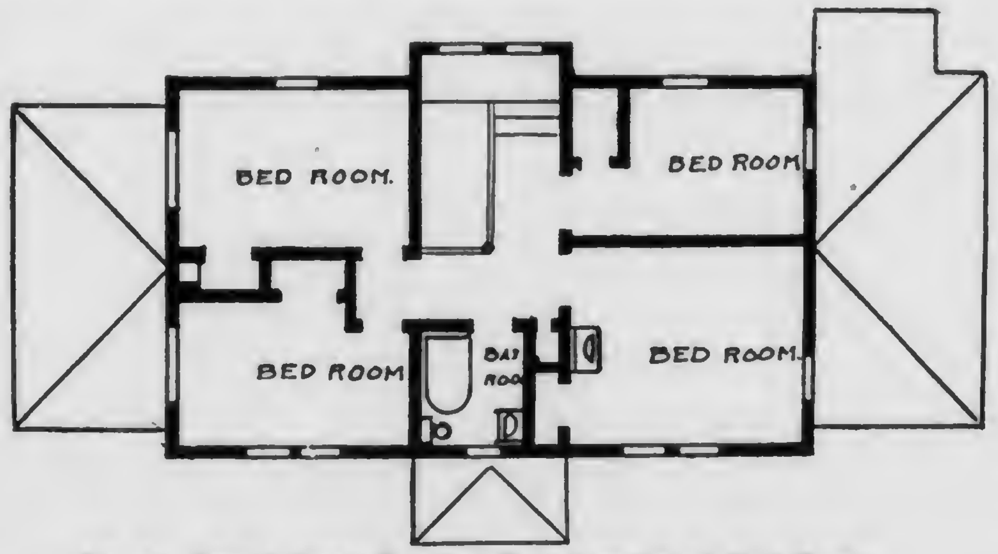

Fig. 4. Second Story, Showing Poor Location of Bath Room

Adjustment of Carburetor.—Many car owners make the mistake of adjusting the carburetor when the engine is cold. It is always best to make adjustment on the motor after it has been run long enough to be thoroly warmed thru. And this applies equally to the valve tappets, etc. It is quite probable that the cold motor will operate very well on certain adjustments that will not agree at all with a hot engine.

Valve Stem Expansion.—An obscure engine difficulty sometimes occurs which is manifested by a reduction of compression when the cylinders are hot, altho they may be known to be tight when the parts are cold. This is caused by the expansion of the valve stems during the warming up process. Unless a proper amount of clearance is allowed between the ends of the stems and the tappets, the valves will be prevented from seating properly.

Magneto Hint.—If the magneto is taken down for any purpose, the permanent magnet should never be left without an ample piece of iron or soft steel across its poles, to maintain its strength.

Use the Rim.—In cases where tire trouble make it necessary to come home "on the rim," the owner should do just that. Many drivers think that it is better to remove the rim and come in on the felloe. This is a mistake. A damaged rim is cheaper to replace than an injured felloe. As a general thing, the rim can be repaired, but the felloe usually has to be replaced after one of these trips.

Upholstery Dressing.—A very good leather dressing is composed of equal parts of glycerine and sweet oil. After applying this mixture with a cloth it should be left on the leather for twenty minutes, after which the leather must be wiped dry. Ordinary soap and water makes a good cleanser for leather, the soap being applied with a sponge and wiped off with a chamois skin.

Tar Stains.—One of the most unsightly blemishes on the bodywork of the car is tar, which is frequently splashed on the polished surfaces from the road. A good solvent for the tar is butter, which should be spread over the spots and allowed to stand for some minutes before being carefully wiped off, when it will bring the tar with it. Kerosene may also be used locally, but with care, since it may attack the finish.

Stretched Casings.—After a casing has been long in use, sometimes stretching develops, so that it takes longer to inflate it. A stretched tire should not be pumped up too tight and incidentally it is best to fit such casings with inner liners. By this means a good many more miles can be gotten out of them.

Restoring Aluminum. — It is hard to restore blemished aluminum to its pristine luster, especially as it is difficult to get the frosted finish back again. Try dipping the aluminum parts in a bath of water slightly acidulated with sulphuric acid, allowing them to remain in the fluid for some time.—Alvah H. Pulver, Wayne Co., N. Y.

NORTHERN GROWN SEED NOT ALWAYS BEST

Practical farmers in many localities are finding that northern grown seeds of certain crops possess qualities far superior to the corresponding varieties produced in warmer climates. In the case of potatoes, oats, barley and certain legume corps several northern states have built up a large and growing seed industry. But there is a limit beyond which the claims of these northern grown seed growers should not influence purchases of farm seeds. It is undoubtedly true that so far as a few of our farm crops are concerned seed grown in a cooler climate is often preferable to seed of the same varieties grown where the seasons are longer and warmer. Hardiness, or vitality and growing power, is one of the chief virtues of seed grown in a locality where the growing seasons are comparatively short. If hardiness is the quality which one wishes to secure in his crops, he can depend on northern-grown seeds; but other qualities must be given proper consideration if we are to succeed in developing strains and varieties of standard farm crops adapted to our respective localities.

In common farm practice it will prove unwise for farmers to depend on seeds from a distance, so far as the bulk of native crops is concerned. In the case of corn any farmer can by persistent, careful selection with reference to such characteristics as early maturity, yield, quality and dependability of the variety grow seed better adapted for his soil and climatic conditions than he can buy. In the winter wheat and rye growing regions farmers can in favorable seasons grow better seed for local requirements than they can buy. The increased yields of timothy and red clover resulting from selecting and perfecting strains and varieties adapted to local conditions afford convincing proof of the value of home-grown seed over that purchased from localities where conditions are so widely different. If farmers could be induced to undertake the develop-

(Continued on Page 16.)

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PHILADELPHIA, PA., NOVEMBER 1, 1919.
VOLUME 46 NUMBER 18

Our job is to serve our readers. Whenever and wherever we can help you, write us.—The Editors.

Save The Savings

IT IS said on good authority that millions of dollars are being frittered away and wasted or lost thru investing in worthless stock, regardless of the present universal unrest, the high cost of living, etc. Many are selling their Liberty Bonds in order to live during the strikes now so prevalent. It is difficult to imagine a more insane action in finances than that of stopping production without just cause, thus cutting off income, and then using up invested capital. Others are being swindled out of their savings by investments in fake or non-productive enterprises, such as oil well schemes, western mining lands, etc. The promise of big dividends is an irresistable appeal to those whose greed is greater than their judgment. If all who are or have been receiving big wages would practice greater economy and invest their surplus in standard stocks; bonds, or War Savings Stamps, the income would be sure, the capital safe, and the wealth of the country would be more generally distributed. There are mighty few farmers that could not find opportunity for profitable investment of their spare cash right in their own business. He is not a good farmer who seeks some outside place of investment if his home and farm needs improvement.

Shall We "Carry On"

BELOW is quoted some comments by a valued contributor upon some editorials published a couple of weeks ago. We are always pleased to have such evidence of close reading as this indicates, and glad to have free expression of agreement or disagreement with what we have to say.

> "The editorials in Pennsylvania Farmer last week, "The Whole Truth or Nothing," and, "The High Cost of Loafing," were gems. Why the one this week entitled, "Keep Sane?" The man who wrote "Pay It Now" last week should not be saying, "be not afraid" this week. It has been customary all the way down thru the ages for business of every kind to "fear" panics. If a panic is coming why should not the farmer be afraid? It was very well to "carry on" during the war, but since the war is over why continue to work twice as long as the other industries on a fraction of other workers' wages?"

The writer has not convinced us that the advice to "keep sane" is not good, no matter what the circumstances may be, or how ominous the outlook may appear. It is because normal, good sense disappears for the time being that mobs collect and become outlaws, that people trample and tear each other in times of danger, and which to a great extent augments the effect of financial panics. Whatever we may feel as to the prospects for farming or other business the most foolish thing to do would be to become panic stricken and act without reason. Job once said, "The thing which I feared has come upon me," and we are seeing that exemplified every day now. Farmers have always prided themselves on their coolheadedness and calm judgment, and there was never a time when the world needed an example of steadfast purpose and honest endeavor more than now. If a panic should come they who act sanely now will be best prepared to meet it, while a disregard of sane counsel is the surest way to precipitate one. We are glad for this criticism for it gives us an excuse to repeat, "keep sane, and be not afraid."

A Good Suggestion

DOCTOR FINNEGAN, Pennsylvania's Superintendent of Public Instruction, in speaking of needed improvements in rural schools, said:

> "School boards will find that the Grange, Farm Bureau and other organizations directly interested in the improvement of rural conditions will cheerfully cooperate in a movement of this kind. There is no question of more concern to those who live in the rural sections than the question of health. The health authorities and the Red Cross will also cordially cooperate in this larger movement for the improvement of rural conditions if the opportunity is afforded them. School boards may very appropriately, therefore, organize this movement and, by bringing all these various agencies into cooperation with them, render a great service not only to rural communities but to the commonwealth as well."

Here is a good suggestion for rural school boards and one that should be acted upon in every locality. We too often find a disposition on the part of school officers to ignore the public in questions of school management. We have never observed that the elevation of an ordinary individual to official position increased his capacity or judgment to any extent, but it does sometimes swell his head. The rural schools would be better than they are to day if, long ago, there had been developed an educational spirit in the community. This might easily be accomplished by inviting the cooperation of parents and organizations in planning for better schools and school equipment.

The Farm and the Farmer

FARM life is for us to enjoy as well as to secure the necessities of life. Naturally, the good farmer gains pleasure and satisfaction from a fine field and a big crop. There is something satisfying in big crops and large profits. There is poetic beauty in fields of luxuriant crops and pastures dotted with fine colts, lambs, calves and pigs. If we are missing the poetic beauty of our surroundings we are not getting half what we should out of life on the farm. There are always two thoughts about a farm: "What did the man make out of the farm," and "What did the farm make out of the man?" Much as one likes to see success follow the efforts of the farmer, one does not wish to see the success come at the price of submerging the man himself. The man should always be master of the situation; he should run the farm, not permit the farm to run his life in all its details. In order to emerge from one's farm a dominant personality one must cultivate other interests before he has given the farm all his stength. He must cease his toils with enough life to enable him to clean up, smile, read a book or spend an hour or two conducting his favorite hobby.

Every one who lives on a farm should try to cultivate a variety of interests so that he may possess resources for the active occupation of his mind. This is a problem that should be given most thoughtful consideration. Suppose something should happen that would change the whole course of your life. Would you be prepared to meet the new conditions? Study the lives of successful men and you will find that cultivating a variety of interests has proved a mental invigorator as well as preventative of nervous ailments. They have ideas and hobbies, many of which give them real pleasure. When not busy with routine work they are never at a loss to know how to spend a few enjoyable hours. Many times these incidental interests are as profitable as the work they regularly perform. By thus keeping their minds pleasurably occupied they do more to save themselves from the danger of "ingrowing thoughts" with the resultant nervous ailments.

Give these suggestions thoughtful study. Try to strengthen your mind by bringing into action brain cells which otherwise would remain undeveloped. Try to find enjoyment in things outside of your routine work. By so doing you will find yourself better prepared to enjoy a happy and useful old age and live longer, whether on the farm or in the city. "Keep out of the ruts and save the road," reads a sign frequently seen along fine eastern highways. It is usually within the power of the driver to keep out of the ruts and in time wear down the rough places and so make the road smooth. It is the same in the highway of life. Incidentally, if one is preparing to make his own life smooth he will be making life more pleasant for others. Let us keep out of the ruts, of the road and of the mind, as far as we can.

It is worse than folly for one to confine himself so closely to business that he gradually loses touch with the new methods of the experiment stations and the younger farmers that he becomes unreasonably conservative. He should cultivate the reading habit so that he shall not become pessimistic and fail to see merit in any but his ways and those of his father. To save himself from this tendency he must read good books and visit other farmers and broaden his outlook. Too many farmers are satisfied with a county weekly and a cheap city daily or semi-weekly, and waste time over these which ought to be devoted to keeping in touch with experiment station work and reading inspiring articles in the best papers devoted to their interests. In many cases the farmer who broadens his outlook by reading and traveling, finds it an easy matter to adapt himself to new conditions in his old age. If he stays on the farm he becomes an authority and a friend of the young men in his community. Fortunate and happy is the old farmer who can keep in touch with the young men and become the envied friend and counselor, of those who are beginning to feel a hunger for the better things in country life. In his quiet moments, when he confesses things to himself, he will remember that old question beginning with the words, "For what shall it profit a man," and then another kind of success looms large.

Between wearing out and rusting out on the farm there is a happy medium well worth striving for. The old man who has cultivated a hobby, a diversity of interests, will be sure to find old age on the farm more pleasant. By so doing he will help himself to keep well and be better able to do that which interests him most.

Rural Health Problems

IMPROVING health conditions is one of the big problems confronting American farmers today. Some of the recent investigations in dentistry, care of the eyes and proper nutrition conducted at some of our rural schools afford convincing proof that we have been devoting more attention to the health of pigs and calves than to the health of boys and girls. The comparison of city and country boys by the draft boards brought out many facts of interest to people who are prone to boast of the superior young manhood in rural districts. The influenza epidemic last fall and winter revealed an alarming necessity of adequate nursing facilities for rural communities.

All of these facts should create a great interest from farm people in the coming National Country Life Conference at Chicago, November 8 to 11. This conference will bring together many representatives of national and state organizations concerned with the development of country life, as well as representatives of farmers' organizations and agricultural leaders. Rural health will be the main subject discussed at the conference. Among the prominent speakers listed on the program are Dr. Oscar Dowling, the aggressive health commissioner of Louisiana, Mrs. Josephine Corliss Preston, President of the National Education Association; Miss Elizabeth Fox, in charge of Public Health Nursing Work of the American Red Cross; and Dr. Eugene L. Fisk, director of The Life Extension Institute. Hon. A. F. Lever of South Carolina, father of the Smith-Lever Agricultural Extension Act, will show how the same principle of federal aid in cooperation with the states may be applied to health work, and will discuss bills now before Congress providing for such aid. Rural community organization in preventing the spreading of disease epidemics will also be considered by the conference.

HARRISBURG LETTER

Fighting For the Potato Crop.—State Agricultural Department officials, having received favorable reports of the wheat and rye seeding this fall and statements that indicate a large and profitable corn crop for the state are now bending their efforts to safeguard next year's potato crop, which because of price conditions is expected to be undertaken on an extensive scale in many counties of the state, notably the industrial sections. Special attention is being given to the spread of information to show how to control the potato wart and the experience of the last year in the lower anthracite field is being passed along so that farmers and growers in other sections may understand the drastic rules that had to be formulated. At the same time, attention is being called to the fact that there are certain varieties in this state which are immune and the importance of making selections of seed potatoes now is being emphasized. The potato wart campaign has reached a stage where the pest can be eliminated, or become a costly nuisance, or worse. In the Lehigh County district, where there are extensive farms, hard work has kept the disease away and in Schuylkill and Lackawanna counties, extensive potato raising counties, it has been checked. The plan of Pennsylvania for getting rid of the pest and the manner in which the federal government will cooperate will be the theme of several addresses by Secretary Fred Rasmussen and Director J. G. Sanders, of the Bureau of Plant Industry.

The Marketing Problem.—Efforts of the State Bureau of Markets to get first hand information from the housewives and housekeepers of Pennsylvania as to what is wrong with the markets so that steps to correct what is possible are not meeting with the success that they merit because people are not answering the questions put to them. Just exactly why the information asked is not forthcoming, no one seems to know, but what has come to hand indicates that the habit of going to the corner grocery has been growing a lot and that the payment of the charge for delivery is preferred to taking a basket to market and buying direct from the farmer. The reports in some cities indicate that what is needed is the establishment of the old time relation between the man or the woman with the market basket and the man or woman from whom to buy regularly the butter, eggs, chickens and other things for the family table.

The Forestry Racket.—Capitol Hill is watching with considerable interest the development of the contest in the State Department of Forestry. On the one hand there is the executive branch of the commission with its old time methods, and on the other, Commissioners Pinchot and Shoemaker, determined to show that the system is wasteful. There will be a battle that will be worth watching and it is by no means uncertain that the whole way of conducting the State Forest system with over a million acres may not be turned upside down and a new plan of administration, inspection and sales evolved.

Changes on the Hill.—In this connection it is interesting to note the manner in which the Sproul administration is getting rid of some people in departments who were either obnoxious politically or else did not fit in with the new business plans. The governor has been putting into effect without any adverisement several changes in methods which have literally revolutionized departments and this has enabled the dropping of men who were found to combine lack of sympathy from a political standpoint and from speeding up of business as well. The changes in system really began while the legislature was in session and the reorganization of the state and health departments started it without many people being much the wiser.

NEW YORK LETTER

Farm Bureau Membership Dues Increased.—Cayuga and Onondaga Counties have held their council meetings and have voted to double their membership dues, making them $2 yearly. This action will doubtless be the policy for the state after the conference of farm agents and committeemen in Ithaca next week, as there is need everywhere of more funds to make good those withdrawn by the government, to cover the extra cost of operating the bureaus, and to make the National Federation of Farm Bureaus an effective force. Farmers in general are pleased with the work, and feel that they cannot well ask for further public funds to support it until the members themselves show a real appreciation and willingness to support it.

State Conference of Farm and Home Bureaus.—All next week several hundred delegates will be in attendance at Cornell College of Agriculture, the occasion being the annual conference of extension workers. The first meeting will be held at Geneva Experiment Station and the State Commissioner of Agriculture, Chas. S. Wilson, and the head of the Foods and Markets Department, Dr. Eugene H. Porter will be the main speakers. There will be much interest in the latter's address due to the attack on Dr. Porter by the Governor who in recommending his dismissal makes a direct attack on farmer's interests.

Need of Better Winter Wheat Seed.—The State College of Agriculture has taken a survey of winter wheat conditions in the state, and reports that it is rare that a field is found having over 90 percent one variety of wheat. Admixtures of other varieties and of rye make a poor quality crop. Seed that is 99 percent pure only should be used and to secure this the college advises sowing small seed plots to develop pure seed, or the buying of seed of known purity and freedom from weed seeds. The college will advise as to sources of the latter and better type seed.

Potatoes and Cabbage.—Choice potatoes are reported as bringing as high as $1.50 per bushel in western and southern counties, but central counties are carrying at $1 bushel. Some deals on the hundred weight basis have been made at $2.20 per cwt. The Western crop is very short, according to federal crop reports, varying from 32 percent of normal in Iowa, to 48 to 61 percent in middle western states and 72 percent in Colorado. Shipments have been made earlier than usual from these sections, due to early maturity and higher prices. Shipments of cabbage from this state increased from 107 to 142 cars lost week, very little as compared to the 400 cars weekly in 1918. Long Island is furnishing but very little cabbage as there the crop was almost a complete failure. Instead of leading in cabbage New York is this year fifth, with Colorado leading. Ohio, Michigan, Indiana, Iowa and Minnesota have also dropped back in production this year. The market is not firm, quotations on Danish running $20 to $30 f. o. b. but the former prevailing. Cortland County is again pronounced the leading crop in the east, with Madison, Onondaga and Chenango counties a normal crop. Here the crop will average 8 to 10 tons per acre, some fields having blight, others showing a fine crop. Cayuga County will average 7 tons. Wayne and Monroe, where aphis caused much loss, will average 4 to 5 tons. Ontario 6 tons. Orleans and Niagara, 3 tons. Some kraut factories used domestic cabbage at $20 per ton.

Northern Apples a Success.—A Malone orchardist reports that of 1200 known varieties of apples 50 are grown in the far northern counties of the state, but only 25 with any degree of success. With these varieties known to be adapted to the climate an extra well colored and fine flavored apple can be grown on a paying basis. Too many northern growers try to get results from apples that do not respond well in this cold region.

Farmers Protest.—The Onondaga County Farm and Home Bureau and the Cortland County Home Bureau in annual session last week protested the attack on farmers evident in the Governor's recommendation that Dr. E. H. Porter, Commissioner of Foods and Markets be dismissed from office on no charge other than that he had been active in looking after farmer's interests, which is the main excuse for the office's existence. Individuals and dairies are taking up this mistaken and evidently partisan policy on the part of the state's executive.

Highway Motor Express Service.—The farmer is as dependent on the access to the markets as he is on the productivity of his farm. The hauling by motor truck of farm produce to market is a great help to both growers and consumers. Nassau County does a lively business in delivering produce by trucks. An effort is being made to have all trucks utilized for freight on return trips as well. Poughkeepsie runs a truck service to New York City, with a schedule of rates to all points on the way. Buffalo sends a similar service to Springville. The National Motor Truck Committee at 7 East 42nd Street, New York City will confer with any organization wishing to develop such a service.

NEW JERSEY NEWS

"Agricultural Week" at Trenton.—There will be interesting exhibits at "Agricultural Week" here in January next. The exhibits will be seen at the State House, Second Regiment Armory, Trenton State Normal School Auditorium and other points. A commercial apple exhibit will be staged under the direction of the State Horticultural Society. Premiums will be offered for apples in barrels, boxes and hampers. Prof. Frank App will have charge of a state corn show, as usual. The State Potato Association is planning this year for its first real competitive potato exhibit. There will be classes for county exhibits as well as individual. The New Jersey State Poultry Association will again hold its annual show. Some forty dairymen showed interest enough in the market milk exhibit here last January to make entries. The coming milk show will be judged by experts and is designed to show milk producers just how good their milk is, how it scores and in what manner it falls short. An exhibit of labor-saving devices for the farm is to be arranged by the Trenton Chamber of Commerce. Mrs. Frank App, leader of the home economics department at the State Agricultural College, will be in a charge. The New Jersey Sheep and Wool Growers' Association will have an exhibit of New Jersey grown wool. The Federal Bureau of Markets has been asked to make an exhibit showing the standard grades and market grades of all the common cereals, and to have an expert in charge who will explain the varieties. A commercial exhibit of hay from the New York Hay Exchange will be combined with this exhibit.

Defends Milk Laws.—As a sequel to a fight on the high prices of milk in Morristown, and a charge made in some quarters that the Morristown board of health thru its enforcement of regulations surrounding the product was responsible for the high prices, the board has submitted a report to the public in which it defends its action. When the residents of the town complained about the increased cost, the milk dealers stated that stringent and rigid regulations enforced by the board caused them heavy additional expense, and that, as a result, the cost of milk became higher to the consumer. The question was brought to a climax at a mass meeting held recently in Morristown, and the result was that the city's board of aldermen requested the board to hand in a report on the matter, which was done. The board pointed out that the state, not alone the local board, was responsible for many of the strict regulations which entailed added expense in the handling of the product. The board, however, did not deny that many of its regulations are enforced, but it emphatically claimed that these regulations are necessary for the safety of the public health. The report went into a detailed history of health affairs to show the necessity for stringent regulations for the handling of milk and the need of a law enforcing pasteurization. It cited a period in 1912, when several cases of typhoid fever in Morrisown were traced to impure milk and impure conditions pertaining to its production.

Demonstrate Farm Drainage Operation.—The first farm drainage demonstration took place during the week on the farm of Clark Dilatush, president of the Mercer County Board of Agriculture, near Robbinsville, and was attended by a large number of farmers. Talks on farm drainage were given by Dr. J. G. Lipman, of the New Jersey Experiment Station, and other prominent experts on the question.

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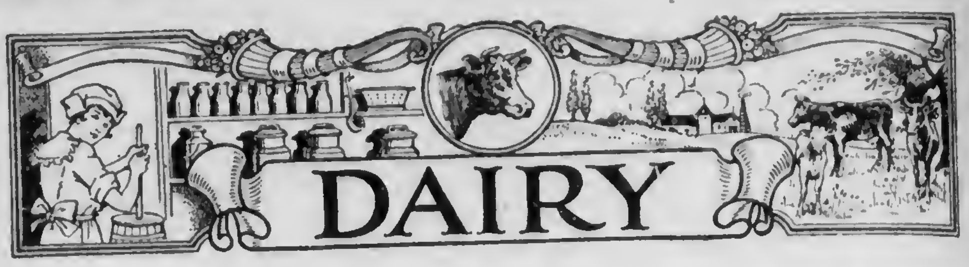

NEW PLAN FOR PAYMENT IN PHILADELPHIA TERRITORY

A new plan for milk payment has been agreed upon for the Philadelphia territory. Surplus has always played a very important part in every price agreement either positively by its presence in the supply or negatively by its seasonal absence.

The probable proportion of it, its value for manufacturing purposes and the capacity of individual milk buyers to utilize it, have been subjects that furnished endless ground for argument. During every month of this year the surplus has been on the market up to the present time. Many plans have been suggested for handling the question. In the past it has been done by making in advance an allowance in the price. This has not been entirely satisfactory for it has proven not to be a safe policy to go to price extremes for short periods of either shortage or surplus. As a result of many conferences held in October and November a plan has been agreed upon and the following brief memorandum issued as advance notice to all concerned.

This Barn, Silo and Cattle Show Thrift and Intelligence

Memorandum of Conference October 16th, 1919.

The price of milk for future to farmers is to be regulated in the following manner: Total production of each farmer for October, November and December, 1919, together with the average of these three months, to be posted in respective receiving stations and duplicates with the office of the Inter-State Milk Producers' Association.

This amount to be applied to the farmer's individual production during following nine months as a guide in determining prices.

The maximum price to be paid for
100% of this amount during January
100% of this amount during Feb.
100% of this amount during March
100% of this amount during April.
110% of this amount during May.
110% of this amount during June.
110% of this amount during July.
105% of this amount during August.
100% of this amount during Sept.

Additional milk produced during those months, if any, to be paid thus:

A committee of three, Pennock Sharpless (of P. E. Sharpless Co.) Henry Woolman (of Supplee-Wills-Jones Company), Robert W. Balderston (of Inter-State Milk Producers' Association), to calculate each month the average price of New York 92-score, solid pack butter as published by the United States Bureau of Markets for that month and to immediately inform all concerned what this may be. Payment for all additional milk above referred to, to be made at the rate of 120 percent of butter price, as thus established for each point of butter fat in the milk.

For example—Farmer "A" produced

2,100 lbs. milk in October
2,000 lbs. milk in November
1,900 lbs. milk in December

Average 2,000 lbs. of milk during these three months. If he produced 2,500 lbs. milk in May, 2,200 lbs. (110% of 2,000 lbs.) would be paid for at the maximum price and 300 lbs. at the price for additional milk. If butter averaged 60 cents for May he would be paid 120% of 60 cents or 72 cents for each point of fat or $2.88 for 4 percent milk at receiving station door.

Prices on direct shipped milk to be calculated by paying for the surplus at a price proportionately lower than the maximum price as is the difference in the two prices at receiving stations in the 50-60 mile zone.

When tenants move, the average of the farm for previous term to be used as a basis for computation. New shippers in business to be paid for 50 percent milk at maximum price and 50 percent at the computed price.

No dealer can be allowed to pay for any part of his supply of milk on the calculated butter basis unless he carries all his own surplus, unless he posts the average production as above indicated and files with the office of the Inter-State Milk Producers' Association a duplicate copy of each notice so posted and unless he co-operates with that office in the matter of keeping all price agreements. The Inter-State Milk Producers' Association expects all dealers to deduct the commission due the Association by its members and to remit the same to the central office. Dealers who do not so co-operate should not of course expect to come under this agreement.

This agreement covers all points in the territory. Any one of the three parties subscribing thereto, (the distributors, the manufacturers and the farmers' organization) reserves the right to ask for a conference to consider the situation if it feels its interests are being jeopardized thereby.

This plan will return more to the average producer than the arrangement in force at present, since most of his milk will be paid for at a price higher than the present one which has naturally had to be reduced by extreme fluctuations in supply on the part of those dairymen who apparently feel no individual responsibility for the condition of the Philadelphia market and whose milk has generally been in excess of any regular demand as fluid milk or as a manufactured product and has therefore been manufactured into products which had to be hold at a lower price, or stored for some future demand.

SOME GOOD RECORDS

Dairymen may be interested in the following facts regarding The Cumberland County Cow Testing Association which just closed its fourth month of activity.

Report for month ending October 14th of the Cumberland County Cow Testing Association, Carlisle, Pa.

Number cows tested during the month, 260.

Number cows producing over 40 pounds of fat, 19.

Owner of cow producing most fat, G. L. Strock. Breed, Grade Holstein. Freshening date—Sept. 25th. Milk produced, 1411 lbs. Butterfat produced, 69.1 lbs.

Owner of cow producing the most milk, I. V. Otto. Breed, pure bred Holstein. Freshening date, Sept. 3. Milk produced, 1800 lbs. Butterfat produced, 63 pounds. Mr. Otto also had a cow which, during the month, gave 1482 lbs. of milk and 51.9 lbs. of butterfat, an animal that freshened on February 21st, 1919; this is a pure bred Holstein cow likewise.

Number cows producing over 1,000 lbs. of milk, 36.

Total milk produced by these 36 head, 36,964 lbs.

Average production per animal, 1,027 lbs.

Average butterfat production, 43.6 lbs.

This is the initial testing association in the county. Mr. A. A. Raudabaugh is the official tester for the 25 members comprising the organization.—P. L. Edinger, Secretary and County Agent.

COW-TESTING WORK IN CLINTON COUNTY

The Clinton County Cow Testing Association is now in the fifth month of operation. This association is one of the projects toward the establishment of better dairying in Clinton County. A large silver cup has been presented to the Cow Testing Association and will be held by the dairyman who possesses three cows producing the highest total amount of milk. The man winning the cup three times will possess it permanently. During the past month the following men have had cows eligible for the honor roll, which is based on 40 lbs. of butter fat or 1,000 lbs. of milk, during a period of thirty days: T. C. Kryder, Mill Hall, 4; J. G. Nolan, Mill Hall, 1; J. H. Dunkle, Mill Hall, 1; J. W. Kiester, Lamar, 1; C. E. Wells, Lamar, 1; George Gummo, Mill Hall, 1.—S. A. Hamil.

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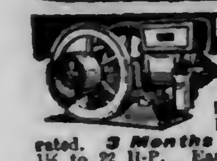

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Dairying as a Business

FRANK A. HAYS, DELAWARE

Much difficulty is experienced by the ordinary farmer in getting his farming on a business basis. Experience teaches that business-like methods are the only methods that pay. The old-fashioned hit or miss type of farming can no longer exist because land values will not permit. The dairyman who knows what it costs him to produce a hundred pounds of milk, a pound of butter, the heifer until she comes into milk, and the bull until he is old enough for service has his dairying on a business basis.

The first and most important step is to get the right kind of stock. In deciding upon this point there is much room for study and consideration. The breed question is a hard one to settle and must largely be settled by the individual. The breed that is best suited to the needs should be selected. The productive capacity of the herd is the greatest factor of all. The cow-testing association has amply demonstrated the improvements that can be made in this particular line by judicious methods. Every progressive dairyman should be a member of a cow-testing association unless he can keep his own records economically. It is better business policy to keep five good cows than twice as many poor ones. The inferior cow in the herd always pulls down the profits, hence the importance of a uniformly high productive capacity. The fact that considerable profit often comes from the sale of pure-bred stock for breeding purposes must not be overlooked, and pure-breds are known to be more uniformly high producers than scrubs or grades. Under all circumstances only bulls of outstanding merit should be used in the herd.

Proper management of a herd is indispensable to success. No dairyman can be successful, no matter how much capital he invests in the herd or how superior the individual animals are unless he is a good manager.

Success is largely dependent on methods of feeding. Too many dairymen fail to study the feed question or to make use of the vast amount of data that has been accumulating at the different experiment stations thruout the country for the past quarter of a century. The farmer will do well to take advantage of the findings of the investigators at work along these lines. Thru the study of feed analysis it is very easy to calculate the relative feeding value of feeds available and thus know which furnishes the largest supply of available nutrients at the smallest cost. Cost alone is not enough to consider; the effect upon the general health and thrift should be given due attention. It is possible on nearly every farm of the different dairy districts to adopt a cropping system that will furnish all the roughage and most of the concentrates required by the cows. Feed cost is often taken as the cost of production. This is wrong because such items as interest, depreciation, taxes, risk, shelter, and veterinary services are then left out of account and the cost account is far from complete.

The interest charge is considerable on pure-bred stock and should be made at the prevailing rate of the locality. The interest on a $150 cow at six percent would amount to $9 per year. The risk would be a considerable item. The shelter charge would be about $5 ordinarily. The veterinary chage will vary; the depreciation charge should best be calculated in with the interest charge. About eight percent for the two items would be a reasonable figure. These add considerable to the cost for the year and should never be lost sight of.

A complete record of production must be kept for each cow. This can be done by the use of the scales and the Babcock test, and it is very convenient along with this record to keep the feed record. With all these records complete the dairyman is getting his business upon a comprehensive basis.

Some men are so busily occupied or for other reasons are unable to keep the necessary records. The cow-testing association is a remedy for this difficulty. The benefits that come to the members of these associations in the way of making possible the elimination of the inferior cows cannot be too highly emphasized. In Denmark the average yearly butter production has been raised from 112 pounds in 1884 to about 300 pounds at present. The work of improvement thru these associations in the United States shows similar results. A report on the five associations of Iowa in 1912 shows an average annual butter fat production of 217 pounds for the 2950 cows tested, while the average annual butter production for the state is only 140 pounds. The test associations are thus enabling Iowa farmers to keep only profitable producers. Aside from the above advantage is the stimulant to co-operation and to community interest. The association is an educational factor and will do much to create the very desirable neighborly interest.

The keeping of a dairy cost account is no longer a matter of choice but a matter of necessity. This may be done either by the dairyman or by the tester employed by the association. The latter only furnishes the farmer with a list showing milk and butter-fat production by periods together with feed consumed. This has been shown to be incomplete as far as total cost is concerned. The other items that have been previously mentioned together with feed and labor charge should be placed on the debit side of the dairy account and the value of products and calves produced placed on the credit side. The differences of the totals of the right and left sides of the account will then show the profit or loss. The cost of producing the different dairy products can be determined by a study of the account also.

From the business standpoint the quality of the livestock must correspond with the land upon which it is kept. This means that only the best dairy cattle can be profitably kept on high-priced land, and it does not mean that quality is a disadvantage on land less high in price. Since most of the land, especially of the corn belt, is now selling for all that it is worth from a productive standpoint the improvement of the dairy herds thruout the country is imperative. The application of business principles by our dairymen furnishes a means to this end.

The use of artificial light to stimulate egg production can do no harm to the hen if the practice is not overdone, because a longer winter day is normal to the descendants of the jungle fowl.

VOCATIONAL SCHOOL WORK

(Continued from Page 3.)

first prize at the Trenton Fair for his corn, and is now selling it for seed. His yield was 75 bushels to the acre. His soil was fair but the season was very dry. His yield was considered very good for the soil and season.

Another boy cleared $100 from a very old peach orchard. Another student made a clear profit of $394 from 73 apple trees that had been neglected for over 40 years. Last season was his second year in renewing it. Still another cleared $217 in a hog project carried on under the pasture-self feeder plan. In one section of the County where we have done considerable work, over 3,000 fruit trees are being planted, mostly by our students. Another section will, I believe, equal the number, those setting out trees all being vocational school students, several not over seventeen years. Other boys are enlarging in potato work, corn, etc. None of the project would be considered completed unless a cover crop, mostly rye and vetch, was planted in the fall where possible.

A farmer whose boy has been taking vocational agriculture was asked a question concerning fruit trees. His answer was, "I will have to ask my boy." The spirit of the boys is typified by the following:

In a discussion of farming, one of the boys, who is planting 510 fruit trees, said: "Wait until you see our place in a couple of years." These boys are building for the future and that future will be closely associated with the farm.

SOME OLD PUBLIC MARKETS

Public markets, both municipally and privately owned, have proved to be such important factors in the urban distribution of foodstuffs that the Bureau of Markets of the Pennsylvania Department of Agriculture is making a survey to find out how many public markets there are in operation thruout the state. Letters and inquiry blanks have been sent to the Mayors or Presidents of Council of all cities and incorporated places in Pennsylvania having a population of one thousand and over.

The replies still are coming in, and, to date, 58 markets have been reported. Of this number, 32 are open or curb markets and 26 are enclosed market buildings. Fourteen of these markets are doing both wholesale and retail business and it is believed that they play a very important part in marketing the locally grown fruits and vegetables.

Some of the markets in Pennsylvania have been in operation ever since Colonial days and still are doing a thriving business. What better argument is needed for the worth of public market institutions to the consumers than the survival of those old markets?

The Bureau of Markets is planning to get more detailed informaton regarding the markets that have failed, as well as those which have succeeded so it will be possible to become a clearing house of information and be of assistance to the various cities in solving their special marketing problems.

Two reasons for keeping down the weeds: They deprive the crops of moisture and draw on the soil for food the crops need. In other words, weeds rob the crops of food and drink.

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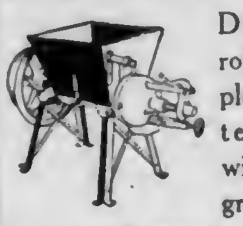

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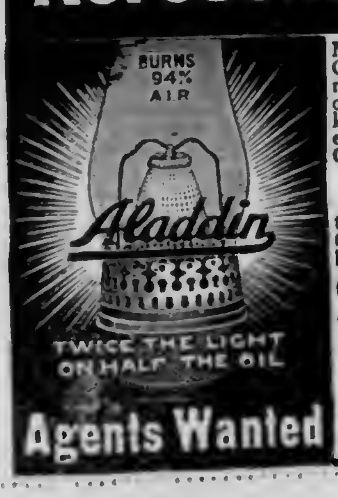

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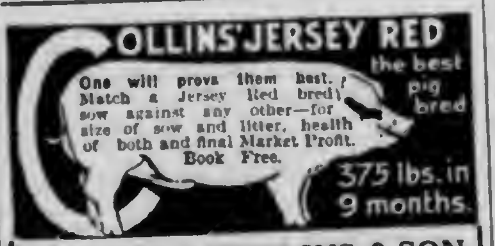
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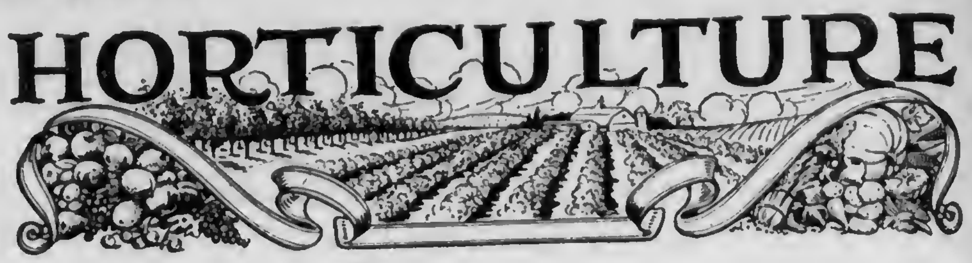
HORTICULTURE



SIMPLE STORAGE FACILITIES

By J. P. STEWART

We have certainly had a wonderful growing season thruout the Eastern half of the country, this year, and it remains to make the most of it by preventing all unnecessary waste. One of the simplest and most effective means of preventing waste in the later stages of the garden, where sufficient good cellar space is not available, is by means of the sunken barrel or box. Many kinds of vegetables and some fruits, such as apples, can be kept in perfect condition as long as desired by a properly located and constructed place of this kind.

A Barrel Pit

An old apple barrel or something similar is all that is necessary to start with. A well-drained spot where some protection from the winds and drifting snow is available, is the next desideratum. The hole should be made deep enough to take in the barrel with the exception of about four to six inches of the top. This upper rim should be allowed to project in order to avoid surface water, and the dirt should be banked up around it. Before inserting the barrel some good-sized holes should be made in the bottom to permit the drainage of any water that may get in. It is not a bad idea to knock most of the bottom out of the barrel for this purpose, and cover the soil thus exposed with straw, but the staves should be well nailed to the hoops before this is done, to avoid a collapse after the dirt is packed in around the barrel.

A little straw or crumpled newspaper is a first class thing to place in the bottom in any case, before putting in any of things to be stored. Some of the vegetables that can be kept very satisfactorily in such a place are cabbage, white potatoes, winter radishes, carrots, parsnips, salsify, beets, turnips, and possibly celery. The trench method of storing celery, however, is preferable where any considereable quantity is to be kept. It is well to pack some of each kind of vegetable in each layer, in about the relative quantities that they are likely to be used, so that they can be got at most effectively when the contents are needed.

In the early fall, the barrels can be filled practically full, if the use of contents is to begin at once, as the protection against the cold can be increased as the contents diminish and the cold increases. Straw or crumpled newspaper, or old blankets or rags, are very useful at this point to cover the products and hold in the heat, but a substantial wooden cover is also desirable. The latter should be a trifle larger than the top of the barrel, and preferably should be double thickness, with the layers crossed at an angle. If the weather becomes especially rigorous, a layer of strawy stable manure can be added on top of this cover, with the aid of which practically any kind of weather can be protected against.

Storing Celery

In the case of celery, probably the best protection is afforded by packing it upright in a trench, dug somewhat deeper than the height of the celery, and then covering it with straw, leaves, or paper, and covering this in turn with a layer of soil. The writer in this way has kept celery in a delightfully crisp and tender condition thruout the most severe winter that we have had in the last fifteen or twenty years. Incidentally it was agreed by all comers that the celery from that trench was far superior to anything that was offered on the general market during the time it was in operation. We therefore especially recommend this method to all those who are a little finicky about the real quality of the celery they have to eat. Further information on vegetable storage which is more technical and also possibly more reliable can be obtained from the various Experiment Stations, and from Farmer's Bulletin 879 of the U. S. Department of Agriculture.

Storing Sweet Potatoes

The sweet potato is an exception to the rather general rule that immediate cooling after harvesting and subsequent storage at temperature close to the freezing point of water results in the best keeping as a rule. This is the very course to follow in the case of apples, but with the sweet potato such a course would be disastrous. In the first place, the sweet potato cannot stand chilling. In the second place, it needs some special drying or curing soon after harvesting, in order to bring out its best keeping qualities. At present it seems that the curing of sweet potatoes is best accomplished by subjecting them to a tempeature of about 80 to 85 degrees Fahrenheit, until they are sufficiently dry, and then they keep best if they can be stored in a good dry room where a temperature of about 55 to 60 degrees can be maintained. We have seen many a bushel of excellent sweet potatoes turned into garbage, simply because these special storage requirements were either ignored or unknown. Such a waste this year when all kinds of food materials are so greatly needed, and especially since the white potato crop is apparently rather short, would be little short of a crime. We trust therefore that all our present readers will not only avoid the common errors in the storage of this excellent vegetable, but will do what they can to bring the right methods to the attention of all their friends and neighbors.

Price of the White Potato

In this connection, a few remarks on the present price situation on the white potato may not be amiss. In spite of the fact that the nation's Irish potato crop is reported as relatively short, the price of this potato is now only about half as high as it was a year ago when the crop was considerably larger.

Just what this is due to we are unable to say. Some of our friends attribute it to our relatively low tariff barriers on the potato, which have enabled some shipments to come across the Canadian border at a very material reduction from prevailing prices here and thus tended to break the market. Others claim credit for the reduction, as a result of their activity in the current campaign the over-worked "high cost of living." Still others consider it only the usual slump in prices that commonly occurs around the harvest time of most of the farmer's crops. We suspect that the experience of last year, when potatoes brought more in the fall than in the spring, has had a lot to do with the present general unloading, with its disastrous effect on current prices.

I do not attempt to say which of these influences has had the most effect in bringing about the present unfavorable prices, but whatever has done it, we believe that the present prices are not justified by the actual crop conditions in the country, and that we are very likely to see much higher prices before the next crop comes in. Some kind of storage is therefore likely to be unusually profitable on this particular crop just now.

ECONOMICAL SOIL IMPROVEMENT

Before the first of November most of the crops will be harvested and the fields will bo left bare for the winter. Good farmers, who are good managers, will disc harrow the fields that are still bare and sow about two bushels of rye per acre. There is still time enough for it to make tho fields green and to fill the soil with roots.

The great need for soil improvement and for cover crops seems to be a pet project for the State Agricultural Experiment Stations. I believe they ae exactly right when they advocate soil improvement. Furthermore they are right when they advocate cover crops. However, in their great anxiety to urge the more general use of cover crop, it may be that they sometimes exaggerate the direct benefit received from cover crops. Do not misunderstood me for I use cover crops whenever it is possible for me to get to it, but it seems to me that it is putting the cart before the horse to lay greatest stress upon cover crops. I believe in giving the soil generous applications of plant food for the direct use of the cash crops and then follow immediately with cover crops. The results are more profitable cash crops, heavy cover crops and an improved soil.

The buying of fertilizer for next spring is a problem to be considered later. Now is the time to disc harrow the vines, stalks and weeds, to sow rye for a cover crop, to gather tons of leaves and low-grade hay for bedding, to haul muck and leaf mould from the swamp and to prevent the farm manure heap from washing away.—R. W. DeBaun.

FRESH TOMATOES IN WINTER

How many know how nicely tomatoes may be ripened in the cellar? My neighbor has told me for several years how she does it but I never had tried it before and didn't realize the real practicability of the plan.

We pulled several plants of both red and yellow varieties, disturbing the roots as little as possible, and hung them on the joists. I can go down cellar and pick a big pan of nice ripe fruit as often as I need it for table use and they are accumulating till I don't know but I shall be obliged to can some more. It hardly seems natural to go down cellar to pick my tomatoes but they are there and my neighbor says it is often possible to have them fresh and nice till Christmas. She says when they have the entire plant and a big bunch of roots they hardly seem to know the difference when they are transferred from the changeable atmosphere of the garden to the more even cellar temperature, and indeed mine ripen better and rot less. They are surely escaping the chilly nights in the garden and I believe the environment is more congenial.

Hereafter I shall plan for this and raise some late plants purposely. Fresh tomatoes in mid-winter would be an unusual luxury for the farm table miles away from any green grocer.—E. M. A.

STORING VEGETABLES FOR WINTER

Home gardeners should at this time take a leaf out of the notebooks of commercial gardeners, who for long have realized the value of storing beets, cabbage, potatoes, onions and other vegetables, say gardening authorities. Storage conditions as good as those used commercially can be duplicated in a small way in the basement of the dwelling or in a pit in the garden or backyard.

If only good, sound, well matured and firm vegetables are stored, gardeners who have thought of canning as the only method of preservation will be surprised at the condition of the products when consumed in the winter. Only the soundest and best vegetables should be stored; one soft or unsound tuber will cause all those near it to rot and deteriorate in the bin or box. It is poor economy to store products of inferior quality.

RASPBERRY CANE BORER

Dead raspberry canes were recently submitted to the Bureau of Plant Industry, Pennsylvania Department of Agriculture, with a request for the reason of the death. Each cane was found to be girdled by a gall made by the red-necked cane-borer. Blackberry, raspberry and dewberry canes are frequently injured by the red-necked cane-borer. If the canes are not killed outright by this pest, they are so weakened that the fruit does not mature. Often this is the first indication of the infestation.

The adult is a beetle about one-third of an inch long, black in color with a dull bluish reflection, the thorax or neck is coppery, reddish or brassy.

The adults appear in May but are more numerous in August. They lay eggs in the new wood at the base of the leaves. The young larvae or worm bores upward and spirally, passing around the stem from two to six times. This girdles the cane and cause a gall or slight swelling. The larvae digs its way into the pith where it spends the winter. In the spring it transforms to a pupa, then to an adult. The adults emerge from May to August.

The only method of control is to cut out infested canes during the fall, winter or spring and burn them. Make it a point to destroy all wild bramble bushes in the vicinity that are infested so there will be no chance of reinfestation. You can cut out these infested parts more easily at the time of pruning.

As might be expected, it was a country newspaper editor, who knows what it means to have multifarious duties, who has figured out that in the course of a year a woman hasn't a thing to do except—to cook breakfast, dinner, supper each 365 times, wash dishes 1,090 times, get the children ready for school twice a day for 180 days and put the baby to sleep 1,560 times, not to mention a few other odd jobs.

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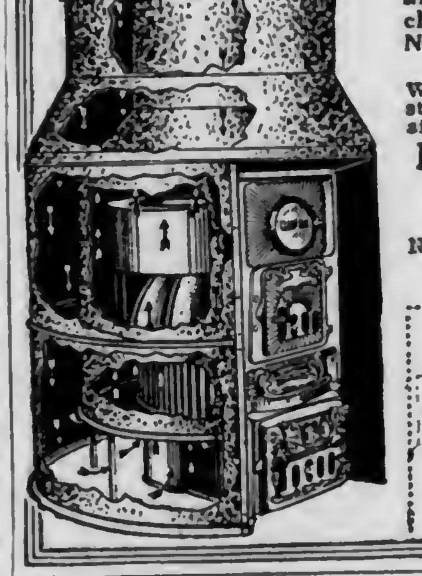

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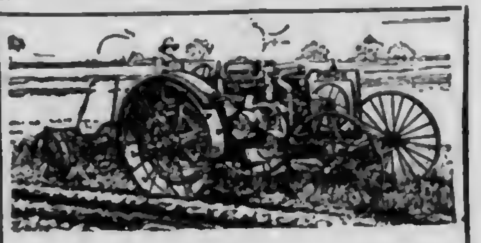

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HOUSEHOLD

MAKING SYRUP OUT OF APPLE CIDER

It's Good! Try Some.

After the demand for fresh cider and vinegar is met there are many apples which are wasted on the farm. The housewife can make for winter and spring use a syrup more delicious and nutritious than molasses, and as good as maple syrup, and this, too, at slight expense, if the left overs are made into sweet cider.

Because cider boiled down to a syrup that will keep tastes cooked and is hardly palatable, the Bureau of Chemistry; at Washington, appalled by the waste of good apples, spent a year in experimenting upon methods of making an apple syrup, fine in flavor, nutritious and good even tho kept indefinitely. The chemist in charge of the fruit and vegetable utilization laboratory of that Bureau says:

"The simplest method of making apple syrup developed by the laboratory is such that the average farm housewife who is provided with a large preserving kettle can readily make a few quarts of the product in her own kitchen. After experiments it has been found that cider to which carbonate of lime has been added will, after settling or filtering and boiling, yield an attractive table syrup without acidity or a boiled flavor."

To make a gallon of apple syrup, stir into 7 gallons of apple cider 5 ounces of powdered carbonate of lime, commonly called precipitated chalk a low priced chemical easily obtained at any drug store. As the cider will foam slightly do not fill the kettle more than two-thirds full. If there is not at hand a large enough kettle for the 7 gallons it can be prepared in as many lots as necessary. Pour the cider when boiled thru a milk separator, so that the sediment from the lime will cling to the inside of the bowl of the separator.

If, however, one is not provided with a milk separator, the boiled cider may be put into glass fruit jars, and allowed to settle over night. After the liquid is perfectly settled, pour off the clear portion into the preserving kettle, being careful not to pour off any of the sediment. This product will be as clear as that put thru the separator, and from this point the process in either case is the same.

Add to this liquid a level teaspoonful of the carbonate of lime, and as it will foam more than on the first heating, make the kettle only one-third full. Boil until it is reduced to one gallon in all. Then the syrup when cooled will show about the same consistency as maple syrup. If boiled too long it may candy. The syrup can be poured directly into jars and sealed, or it may be allowed to settle again and the clear syrup poured off. The sediment is not injurious, and will remain in the bottom of the jar when the syrup is poured off for use.

The housewife will find that she has a clear ruby-colored product, varying from dark ruby to lighter shades, according to the kind of apple used. It will have a delicate flavor, somewhat like that of the sugar which forms when apples are baked. Children enjoy it on bread and butter, and it is very healthful. It makes an excellent syrup over rice or puddings. Or, it may be used in cooking in place of molasses. Breakfast gems, Boston brown bread, fruit cake, are particularly delicious when it is used in this way. It may also be combined with milk in making custard.—Mrs. John W. Douglas.

WATER IN HOUSE AND BARN

On our farm we are putting in a water plant that will furnish water for the humans and the friends in the stables. The plan for the system is a big tank (pneumatic) in the cellar, closed at both ends, into which water will be pumped from the wells nearby. Out of this tank it will be forced by compressed air pressure to the house and the barn.

We men have dug the ditches for the pipes at odd spells this fall, so that the extra work has not been particularly noticed. We thought it best to put the pipes down about three feet so as to be out of any possible reach of the frost.

Did you note that I spoke of "wells" from which we intend to take our water? One of these is about a rod from the door leading to the kitchen. This water is soft enough so that the women folks can wash with it. The other is a drilled well a couple of rods west of the barn. The water from this well is so hard that it can not be used for washing, but it has never failed us, whereas the well at the house does sometimes give out. Hence we decided to have the barn well hitched onto the system in order that we can use it in an emergency when the soft water well fails us.

The matter of getting water for household purposes certainly is one that calls for more attention than it has heretofore received on the average farm. To pump and carry water to do all the washing and cleaning that has to be done in a farm home calls for the outlay of a great deal of strength, and often the housewife has not this strength to spare. Menfolks are often too busy, to bring it in for them, so rather than call on them to do it, most of the women folks tug and lug water until they prematurely break down. It is one of the hardest kinds of work that they have to do.

So we are putting water into our house thus handily. And we are going some day soon to have our dreams of a bath room realized.—E. L. Vincent, Broome Co., N. Y.

MAKING GOOD SAUSAGE AND LARD

Food was never more valuable, never more in demand than today. This condition is an aftermath of the war, and is certain to continue for some time to come.

Because of this condition, the thrifty farmer will exercise the greatest care in seeing that food is not wasted. He will use methods and devices that are economical and efficient, especially in the making of sausage and lard.

Sausage making is far more simple when done well than when done badly—and infinitely more profitable. Making good sausage means more than using good ingredients. It calls for modern equipment. And, invariably good equipment is the best kind of insurance against waste of time, labor and spoilage.

One of the important devices necessary to make full use of hogs to be converted into sausage in an efficient meat chopper. The essence of quality in country sausage is the mechanical perfection in the cutting of meat. Consequently, the chopper used for such work must really chop —not merely tear, mangle or shred the meat.

Besides, a meat chopper has other valuable uses on the average farm. The chopper may be used to decided advantage to make mince meat, hash, hamburg steak, hogshead cheese, croquettes, or chop corn for fritters, stale bread and crackers for crumbs, scrap meat for poultry and other things too numerous to mention.

Besides a good meat chopper, the farmer, who converts hogs into sausage and lard, should be equipped with an efficient sausage stuffer and lard press. With the present high market price of hogs and the high wages paid to farm workers, the farmer will find a stuffer and press can be operated with a minimum amount of labor and the maximum savings of food.

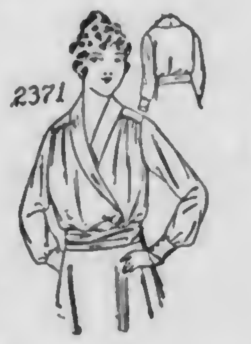
Using old jar rubbers is more likely to be extravagant than thrifty. The value of a few jars of fruit or vegetables when spoiled because of poor rubbers will more than pay for all the rubbers used during the canning season.

If your boys and girls are not members of junior project clubs they are missing out on fun and instruction to which they are entitled.

PENNSYLVANIA FARMER PATTERNS

Give figures and letters of each pattern exactly as printed at beginning of each description or we will not be responsible for correct filling of orders. Give bust measure when ordering waist patterns, waist measure for skirt, and age for children's patterns. Address Pennsylvania Farmer, 261 S. Third Street, Philadelphia, Pa.

2371.—Graceful Model.—Especially good for crepe or silk; also challie flannel, velvet, linen or batiste. Black satin with pipings of white; or blue crepe with facings of matched satin, would make an attractive waist. The back forms a yoke over the shoulders, where it meets the gathered fronts. The pattern is cut in 7 sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. Size 38 will require 3¼ yard of 36-inch materia. Pattern, 10 cents.



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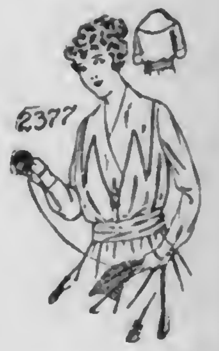
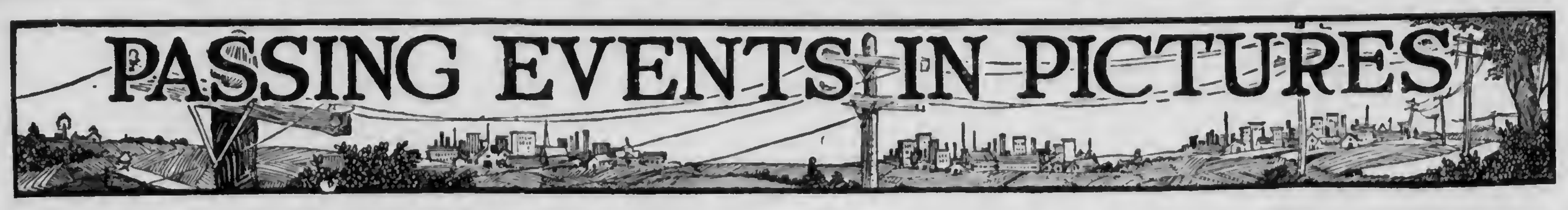
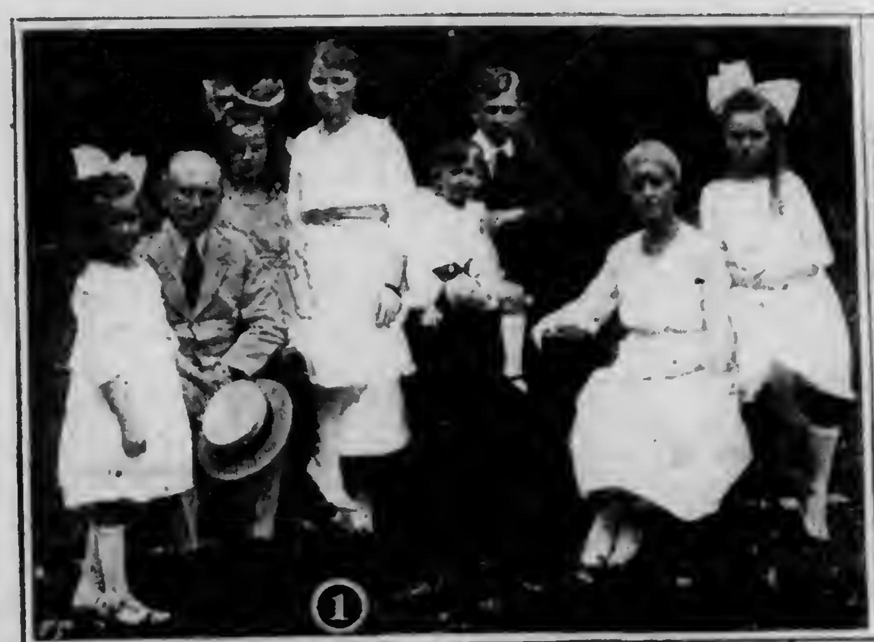


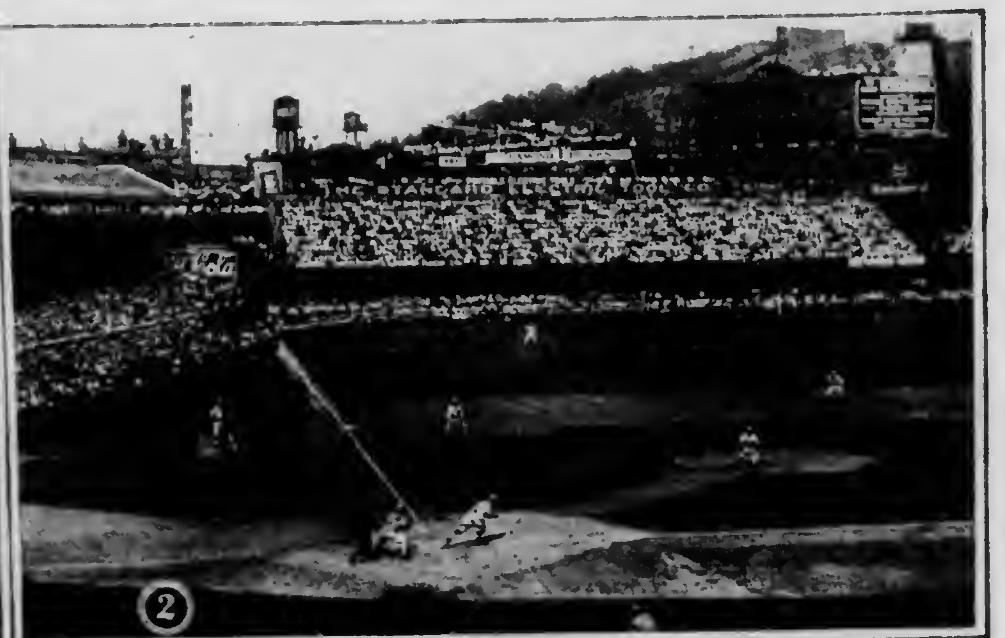
2377

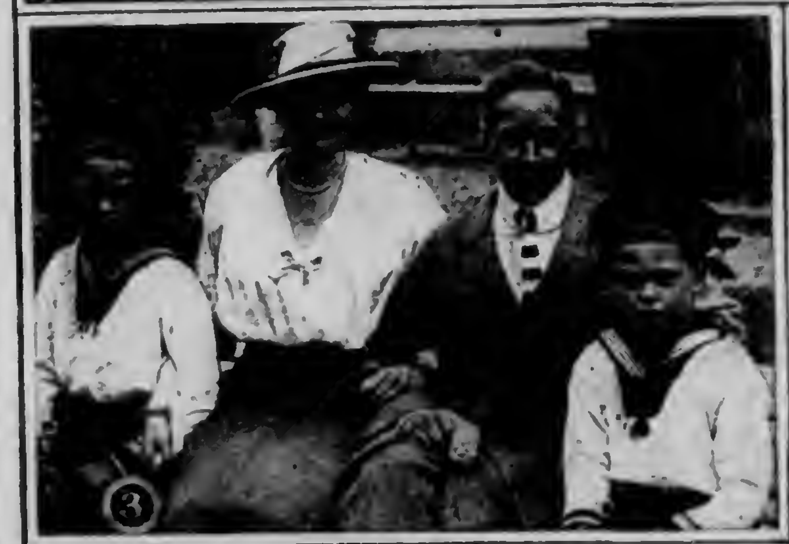
2377.—Good Tailored Waist.—The front are closed under a shaped collar. The long sleeve is finished with a tab extension over the cuff. Green crepe with tan pipings, or black satin with white facings would be good for this model. The pattern is cut in 7 sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. Size 38 requires 3⅛ yards, of 36-inch material. Pattern, 10 cents.

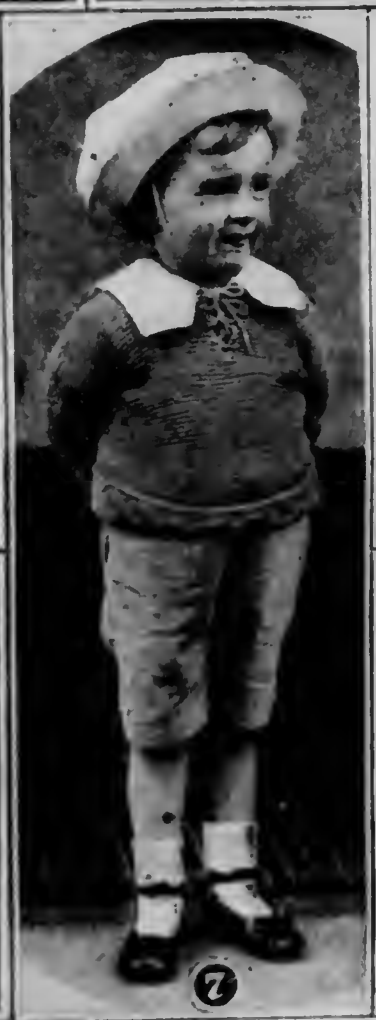


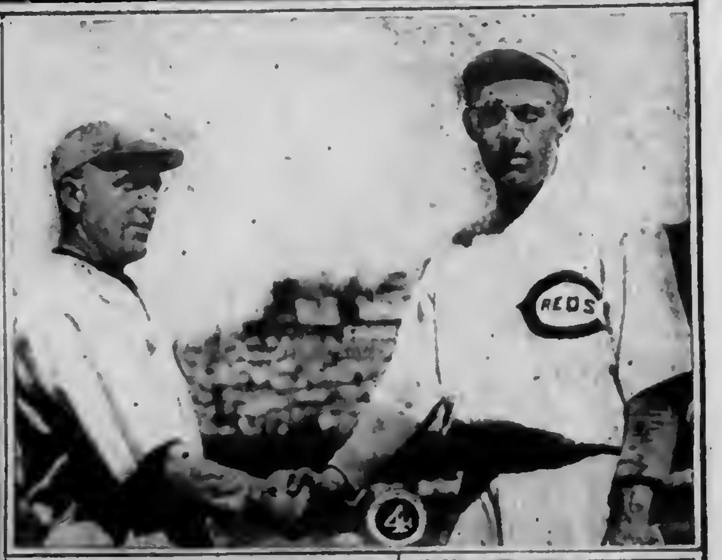
PASSING EVENTS IN PICTURES

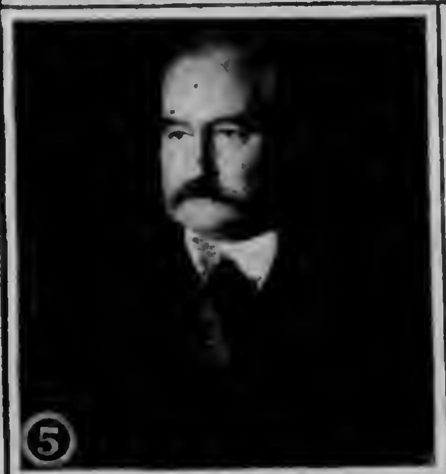


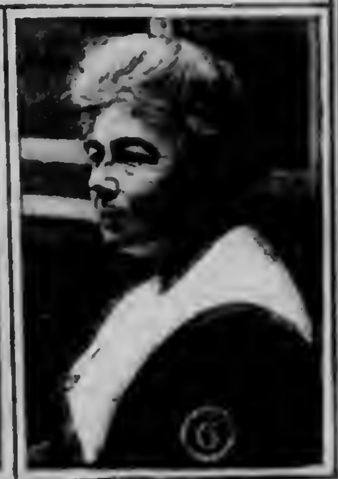


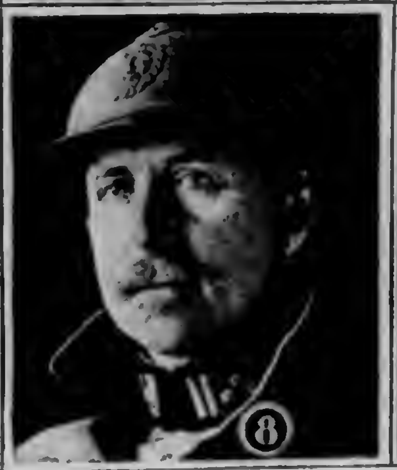


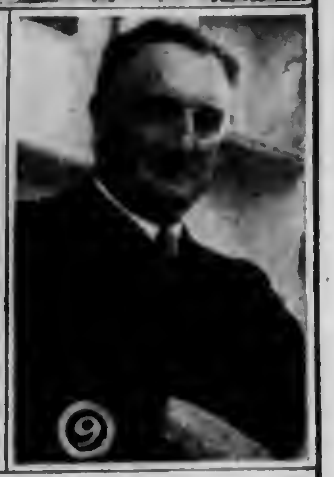


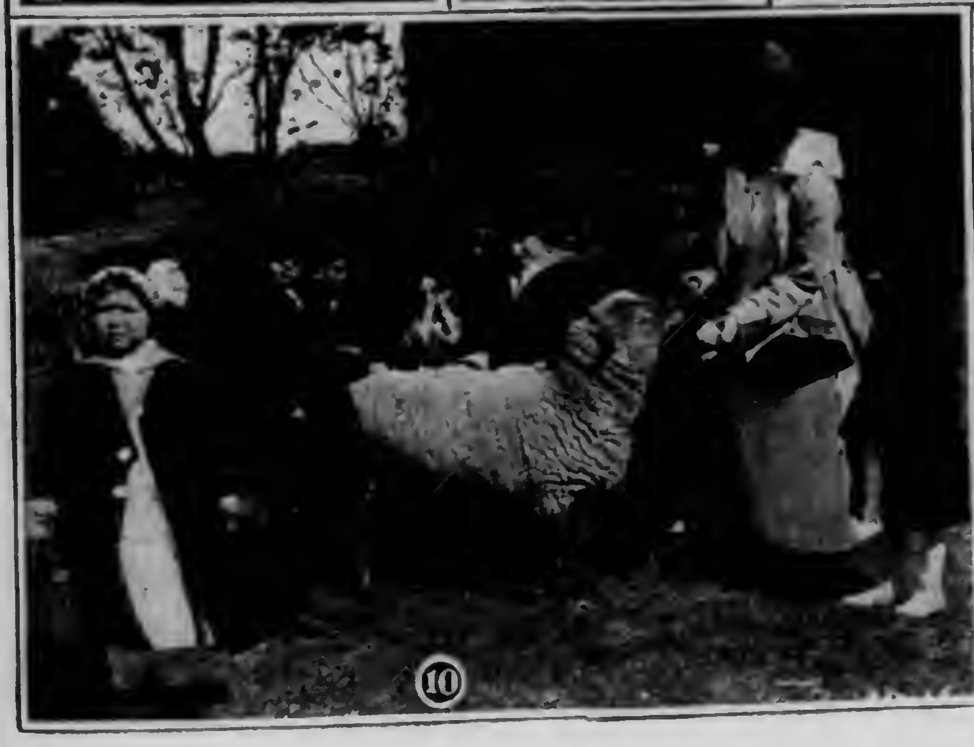


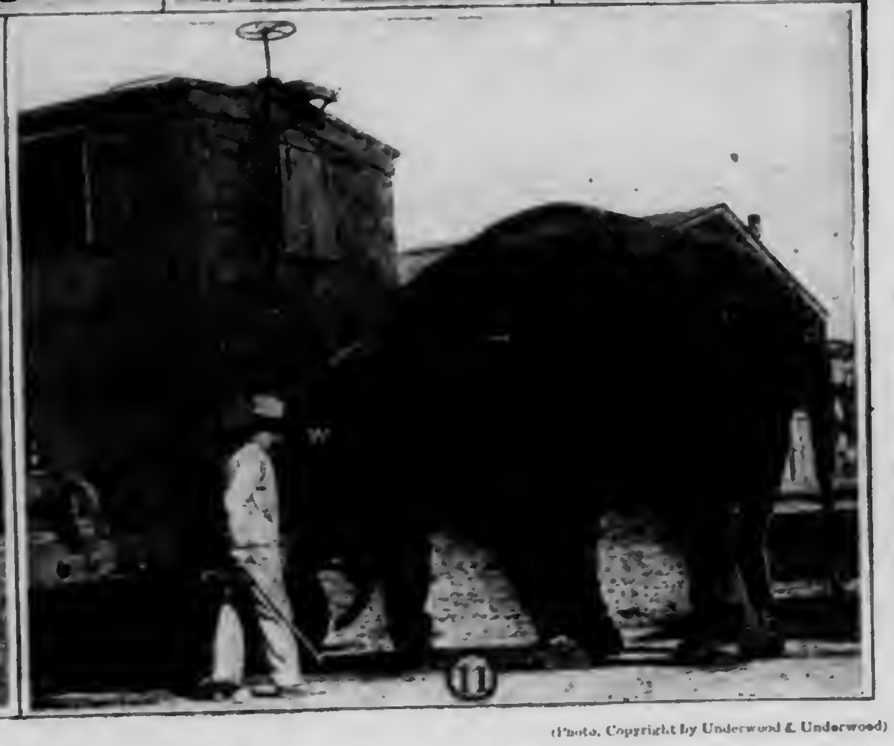












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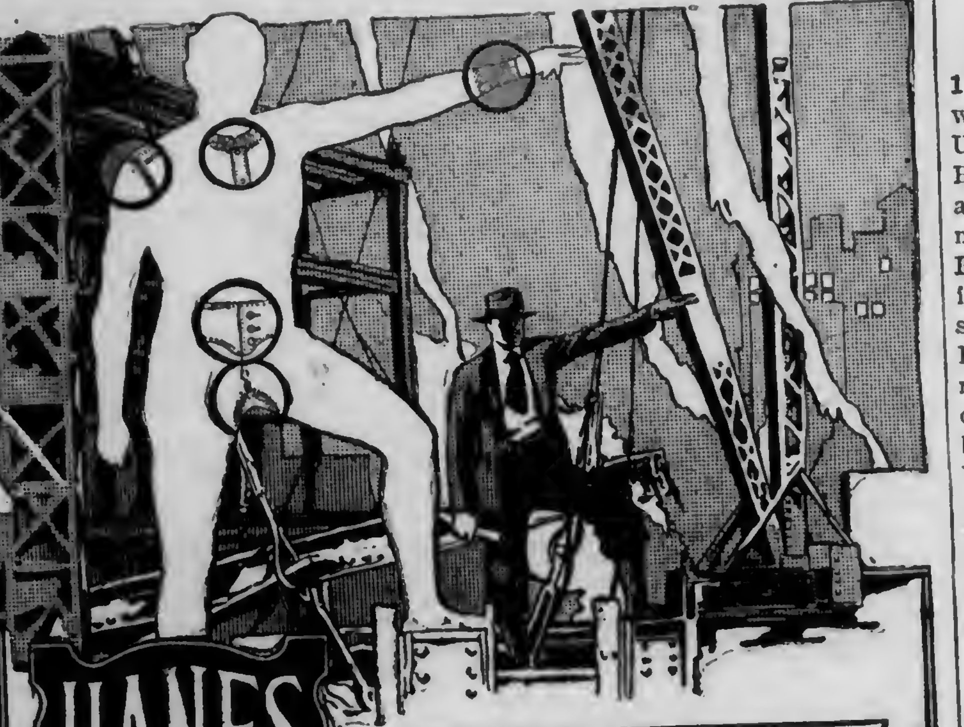
1.—The Secretary to the President, Mr. Tumulty, and his Family.
2.—Redland Park, Cincinnati, Showing the Opening Play of the World's Series.
3.—German Ex-Crown Prince, Wilhelm, and Family, Taken After Reconciliation.
4.—Cicotte of the Chicago Team, and Reuther of the Cincinnati's, before Playing.
5.—Senator Fall, Author of Treaty Amendments which were Defeated.
6.—Dr. Mary Gordon of London, Famous Woman Physician, on visit to this country.
7.—Three-Year-Old Adopted Son of Vice President and Mrs. Marshall.
8.—The King of Belgium, Now on Visit to this Country.
9.—Viscount Grey, British Ambassador to this Country, Lately Arrived.
10.—City Children Studying Nature Objects at First Hand.
11.—Herculean Strength of an Elephant Used to push a Freight Car.



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Union Suits for Boys are as wonderful value as are our men's garments. To mothers and fathers Hanes boys' Union Suits are superb. Cozy, fleecy warmth and the finest workmanship put these boys' suits in a class distinct from all others. *They certainly do stand the wear and wash!*

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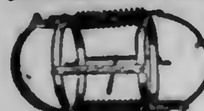

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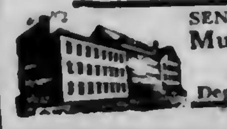

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FARM LOAN BANKS ACTIVE

During the month of September, 1919, an aggregate of $8,400,360 was loaned to 2,841 farmers of the United States by the Federal Land Banks on long time first mortgages according to the monthly statements made to the Farm Loan Board. The Federal Land Bank of Spokane leads in the amount of loans closed, the same being $1,056,750, with the Federal Land Bank of St. Paul running next in amount $1,044,200. The other banks closed loans in September as follows: Houston, $922,235; Wichita, $763,800; Louisville, $718,700; St. Louis, $705,875; Omaha, $669,400; Baltimore, $577,900; Springfield, $542,200; Berkeley, $489,300; New Orleans, $462,225; and Columbia, $447,775.

On September 30, 1919, there were operating in the United States 3,830 Farm Loan Associations. The total mortgage loans made by the Federal Land Banks thru these associations, September 30, 1919, to 100,412 farmer-borrowers, amounted to $261,175,346. During September, 7,485 applications were received asking for $25,491,081. During the same period 5,174 loans were approved, amounting to $15,816,179. Altogether 210,205 farmers have applied for loans under this system, in the aggregate amount of $605,575,801.

Up to September 30, 1919, interest and amortization payments due by borrowers to the banks amounted to $12,666,313.61. Of this amount all but $172,456.72, or 1 and fourtenths percent had been paid, and of this sum, $86,816.60 represents instalments which had only become due during the month.

STANDARD CONTAINERS

A discussion of the Standard Barrel Act adopted by Congress and the importance of standard weights and measures to marketing work occupied the attention of sealers of weights and measures in Pennsylvania at the second day's session of their seventh annual conference.

F. S. Holbrook, representing the National Bureau of Standards spoke on the Standard Barrel Act and pointed out that the time may come when various commodities in bulk will be sold by the barrel irrespective of the present standard weight per bushel or barrel of such commodities.

In his talk on standard weights and measures in marketing work, Guy Smith, director of the Bureau of Markets of the State Department of Agriculture, spoke of the work which his bureau and the Bureau of Standards of the State Department of Internal Affairs will do in standardizing containers as provided for in an act passed by the last legislature. Smith declared that at present there are many kinds of containers in use which are confusing to the purchasing public and that the intent of the legislative act is that his bureau and the Bureau of Standards shall adopt standard containers, as few sizes as possible, which shall be used in the sale of commodities now sold in many and varied sized containers.

NO "PRICE FIXING" FOR AMMONIATED RAW FERTILIZER MATERIALS

Reports have reached the United States Department of Agriculture indicating that statements have been circulated to the effect that the Department has "fixed prices" for raw fertilizer materials pursuant to a conference held with the producers of such materials at Washington on October 6 and 7. The Department announced today not only that it has not "fixed" any prices as reported, but that, after due consideration, it has reached the conclusion that, in the circumstances, it would not be warranted at the present time in naming a fair profit for such raw fertilizer materials as sulphate of ammonia, dried blood, tankage, fish scrap, and cottonseed meal. The Department however, will continue fully to exercise its own powers under the licensing system against profiteering as well as in conjunction with the Department of Justice. The amendment to the Control Act now pending in Congress carries a provision to the effect that any one who violates the Act by profiteering or otherwise shall, upon conviction, be fined not exceeding $5,000 or be imprisoned for not more than two years, or both. Any act of profiteering under the law or any other violation of the law, may be prosecuted criminally after the licensing provisions thereof are terminated by a formal proclamation of peace.

APPLES BRING BIG PRICE

Altho the total apple crop of the country is only 7 percent less than the average, the fruit has been selling at the highest prices ever paid at this season of the year since apple growing became a commercial industry. This is due chiefly to the generally high level of all prices and to the scarcity of some other fruits but the unprecedented demand for cider apples has helped to keep up the price. In western New York where the commercial crop is now estimated at 1½ million barrels as compared with 4½ million last year, growers, on October 1st, were receiving from $6 to $6.50 per barrel for A grade fruit and from $4 to $5 per barrel for tree run. Cider and evaporator stock are selling mostly at $1 to $1.25 with some up to $2 per 100 lbs. and apples for canning are mostly from $2 to $2.50 per hundred lbs. with a few sales as high as $4 per hundred pounds for hand picked fruit.

In the Hudson Valley the commercial crop will be nearly a million barrels. Growers are receiving from $9 to $10 per barrel f. o. b. for McIntosh, $9 for Jonathan and Spy, $7 to $8 for Greening, $7 to $7.50 for Baldwin and Stark, and $5.50 to $6 for Ben Davis.

NORTHERN GROWN SEED NOT ALWAYS BEST

(Continued from Page 5.)

ment of improved strains and varieties of some of our standard farm crops, greater progress would be made than could possibly result from depending upon seeds imported from other sections.

Another difficulty confronting farmers who depend upon seeds purchased from distant localities is the question of susceptibility to diseases when changed from one region to another. A variety which may prove resistant to certain diseases in one region frequently fails to retain such resistant powers when transferred to a region where soil, climate and moisture conditions are widely different. Outside of a few special crops the best seeds are grown where the largest and best crops from which they are obtained are fully matured during a normal growing season.

POULTRY

BLACKHEAD IN TURKEYS

My turkeys get sick and droop wings, lower heads and walk stifflegged. They eat little but drink lots of water and get thin and weak. They all act the same way and nearly always die. Liver shows raised yellow spots and sunken, inflamed spots. The disease begins when the poults are about one month old and continues until winter, taking about half the flock.—J. C.

Your turkeys are undoubtedly affected with blackhead. The spots upon the liver are an indication of the disease and the lameness is often an after-effect. The fact that you have had the disease before indicates that it may be a constant menace, because of the contamination of the soil and the fact that it is possible for the poultry on the farm to carry and spread the disease without being affected by it.

As far as possible keep the turkeys away from the other poultry and as soon as the turkeys become affected, remove them from the flock. If it is in your entire flock, it is advisable to give them a good dose of Epsom salts in drinking water or mash.

You will have considerable difficulty in eliminating the disease, but by strict sanitation about the poultry houses, the use of lime on the ground, raising poults on new ground and keeping the flock of old ones away from the poultry, it will be possible to decrease the losses.

After a turkey once gets the disease, there is no medicine that will react against it.

POULTRY RECORDS PAY

Aside from the necessity of reporting the income tax which compels the keeping of records, the poultry accounts are so important that they should never be neglected. Thruout the country are many farm flocks which have been managed by guessing for many years. Some think that their flocks are profitable when they are really a losing proposition. Others complain that the hens do not pay when they are furnishing a large amount of food for the home table and a cash income over expenses.

It is only simple arithmetic that is necessary to keep poultry accounts accurately. Keep a record of the cost of the feed. Mark down every cent that is received for eggs and poultry meat. Balance the accounts every month. The profit can be counted as the wages received for caring for the flock. Of course accounts can be much more complicated but if every farm flock is managed by simply knowing costs and income, a great deal will soon be known about farm flocks that is unknown now.

Separate feed bins for the hens are necessary in order to keep poultry accounts. The birds should not be fed from the bins and cribs which contain the feed for the cows and hogs. When ten or twenty bushels of grain is transferred to the poultry bins, the hens should be charged for the grain at the market price. Of course this takes a little time but it is more than balanced by the results that come from an understanding of the financial side of the business.

The keeping of poultry accounts has been the factor which has caused much improvement in farm flocks. One poultryman decided to keep records and soon found that his flocks could not pay because of the low average egg production. He began to select his hens for egg production and purchased cockerels from a bred-to-lay strain. In one year the pullets improved in egg laying enough to make the poultry accounts show a profit. Before keeping poultry accounts this farmer had been satisfied with his flock because he did not know that they were not making him any money for his work.

One item in the poultry income is the manure taken from the dropping boards. We do not credit this to the birds but feel that the value of the manure is just about equal to the cost of removing it from the houses. It is an item in their favor, but we do not wish to complicate the bookkeeping and so do not bother to estimate its actual value and credit it on the books.

One of the advantages in poultry records is the inspiration that they contain. If nothing is known regarding the earning power of the flock there is no incentive to improve that earning power. A flock that shows a good profit is a stimulation to the farmer to make the profit greater. This leads to an improvement in management that increases the income from the flock and adds to the satisfaction obtained from the business.—R. G.

LONGER DAYS FOR HENS

Artificial light in the hen house in winter does not make Faithful Biddy lay two eggs a day, as some people seem to think, but it does make conditions such that she does not have to wait for spring to begin her spring work. The proper use of artificial illumination on layers not only increases the total number of eggs laid each year by the hen, but it gives increased production during the fall and winter when prices are high.

Using light is not a forcing measure, if rightly used, say the poultry workers at Cornell. It merely makes conditions more natural for the hen by lengthening the day and therefore allowing the hen to eat more feed and secure more exercise. This keeps her body supplied with feed and gives her the activity which produces health and vigor and which is essential to egg production. It gives the hen 10 or 12 hours of night and the same of day.

The hen naturally is not lazy and she does not like, because of darkness, to have to spend 15 or 16 hours on the roost in the intense cold and with nothing to eat during that time. The remaining 8 or 9 hours on the floor are not enough. She should not be expected to feed as well nor lay as well under these conditions.

Pigs make pork, pork makes money, money makes the mare go. Save every pig; they never were worth more than they are now.

A long, loud crow is a pretty good sign of a vigorous rooster.

Have a Happy Health Heated Farm Home

MORE than one-third of every year is spent indoors with the windows all tightly closed. Unless the heating system automatically circulates and refreshens the air, you are risking the health, vitality and comfort of your family. The safe and practical heating system to install is the

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down in the basement. The Life Saver gives true Health Heat—an ample volume of properly warmed, pure, moist air. The Life Saver does not ruin the piano, crack the furniture and breed disease by drying out the membranes and delicate tissues of the human system.

Old-style cast iron furnaces, smaller at the bottom than at the top, are inefficient in design, because they admit a larger amount of cold air than can possibly find passage between the upper part of the furnace and the casing. When the owner crowds the furnace to make the house comfortable, the result is forced draft and congestion, causing the air to be fried instead of delivered to the rooms warm and moist. There never has been an excuse for a dirty, inefficient stove on a $50 rug since basements were invented. The Life Saver removes all the stove muss and bother from the living rooms and assures an ample supply of Health Heat, as we demonstrate conclusively in the booklet that will be sent immediately upon receipt of coupon.

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Markets

PHILADELPHIA PRODUCE

Philadelphia, Pa., Oct. 27, 1919.

The supplies of potatoes are not as heavy as they have been during the past week and the week previous and there is a better tone to the market with higher prices prevailing. This applies especially to the potatoes coming from New York state which show a still further improvement in quality over the improvement as was noted in these columns last week. These New York State potatoes are therefore showing an advance of fully 25 cents per cwt., as they are now selling at $2.50@2.60 per cwt. Maine potatoes are also showing an advance as they are now selling from 10@15c per cwt. higher, bringing generally from $2.50@2.75 per cwt. The Pennsylvania grown potatoes as usual are bringing the highest prices here the best selling at $2.85@2.90 with the ordinary grades at $2.60@2.80. The New Jersey giants are also sharing in the advance No. 1s selling today at $3.55@3.65 per 150 lb. sack with the No. 2's at $2.40@2.65 per sack. It is rather peculiar however that the potatoes hauled in by the nearby farmers do not appear to share in this advance and practically the same prices are prevailing as a week ago, mostly 90c@$1.10 per ⅝ basket with some extra fancy at $1.15@1.20.

Sweet potatoes from the Eastern Shore of Virginia are in moderate supply, and under a good demand the market has recovered the decline of 25@50c per barrel as noted in these columns last week and No. 1 potatoes are now selling from $3.25@3.75 per barrel with No. 2's mostly at $2.25 per barrel. The New Jersey sweet potatoes are firm and active at 75c@$1 per ⅝ basket for the Yellows and 90c@$1.10 per basket for the Reds, while No. 2's and culls show the wide range of 25@60c per basket.

Vegetables

The season on nearby Green and Wax beans has come nearly to a close and a few remaining are selling generally from $1@2 per ⅝ basket except for extremely poor stock which sells at lower values as to quality. Southern beans however are beginning to make their appearance, some Carolina stock selling today at $2.50@3 per bushel hamper, while the Norfolk are bringing from 75c@$2.50 as per quality. Nearby bunch beets are ruling about steady at $2.50@4 per 100 bunches, with only the fancy Penna. beets bringing the top prices. Loose beets in barrels are selling from $1.75@2.25 per barrel. Brussel Sprouts are in light supply and bringing the fine price of 20@25c per quart. New Jersey and Pennsylvania carrots are firm at 2@3c per bunch when fancy but some poor and small are weak at 1@1½ cents per bunch. Loose carrots show no change at $2.25@3.25 per barrel.

Cabbage is much more plentiful than it was a week ago. At this writing there is about 35 cars of New York state cabbage on hand and the domestic is selling from $17@22 per ton with the Danish at $25@33 per ton. The cabbage hauled in by the nearby farmers shows a wide range of 25@60c as to quality. Cauliflower is showing a sharp advance, the western New York selling at $2.75@3 per crate for the fancy and $1.50@1.75 per crate for the choice, while the Long Island cauliflower is firm at $3.50 per crate. Celery is very plentiful and the market is lower, best washed stock selling at 60@65c per bunch but most sales however range from 25@50c with some poor still lower. New York state celery in the rough sold today at $1.50@4 per crate but the latter price is extreme and only strictly fancy brought this price. There is very little corn left on the market and quality is very irregular with prices ranging from $2@4 per 100 ears. There have been no cucumbers on the market for several days and strictly fancy would bring a high price. Nearby egg plants are also getting very scarce and selling at $1@2 per ⅝ basket as to quality. Some southern egg plant, however, is making its appearance on the market and selling at $4@5 per crate. Garlic is unchanged at 20@30c per lb. Horseradish is firmer at $7.50@8.50 per cwt. Good lettuce is very scarce and some fancy New Jersey stock sold today at $3@3.50 per box with poor quality from $1@2.50. A car of New York state lettuce sold this morning at $1@2.50 per box and some Virginia lettuce of poor quality brought from $1@1.75 per hamper. Lima beans are scarce and show a big advance over last week's prices with sales ranging today from $3@3.25 per ⅝ basket and $3.50@5 per bushel hamper. Mushrooms are more plentiful and lower with sales ranging from $1.25@2 per 3 lb. basket. Onions are more plentiful than they were a week ago and while a few were sold today at $3.75 per 100 lb. sack the market price was mostly $3.25@3.60 per sack with some New Jerseys at $3@3.25. New Jersey onions in hampers show poor quality and sold all the way from 50c@$1.25 per hamper. Okra is a little easier at $2.50@3.50 per crate. Parsley is dull and draggy at 75c@$1.25 per hamper.

There has been a very few peas on the market which sold from $8@10 per drum as to quality. New Jersey peppers are doing better under the lighter supplies with the green selling at 40@65c per basket and reds 50@75c per basket. Romaine is firmer and higher at $1.25@2 per box. Radishes are plentiful and lower and selling mostly at $1@1.50 per 100 bunches. The season on nearby tomatoes is about over and fancy stock is very firm at $2.50@3 per ⅝ basket with most offerings however only showing quality good enough to bring $1.50@2.50 per basket. There was a car of tomatoes from California today which sold at $3 per lug of about 33 pounds. Hothouse tomatoes are firmer and higher selling mostly at 20@30c per lb., with No. 2 stock at 10@15c. New Jersey and Pennsylvania turnips are doing better the whites selling at 25@50c per basket and the yellow from 50c@$1 per basket. The large rutabagas are moving slowly at $1.50@1.75 per cwt. New Jersey spinach is a little firmer at 20@35c per ⅝-basket. Yams are about steady at $3.25@3.75 per barrel.

Fruits

While the offerings of apples today were quite a little heavier than they were a week ago there is a good active demand and movement with last week's prices being fully maintained. At this writing prices are ranging about as follows: Baldwins, $5@8; Ben Davis, $4.50@6.25; Ganos, $4.50@6.50; York Imperials, $4@7.25; Stayman Winesaps, $5@8; Starks, $5@7; Winesaps, $5.50@7; Twenty Ounce, $6@7.50; Wolf River, $6@7.50; Gravenstein, $5.50@7.25; Blush, $5.50@7; Rome Beauty, $6@8; Greenings, $5.50@8.50; Box apples are also very firm and active at $2.25@3.50 per box generally, with some extra fancy varieties exceeding these prices. Pears have been arriving more freely and the market shows a weaker and lower tendency with prices now ranging as follows: Barrels: Seckels, $13; Sheldons, $13; Anjous, $9; Clairgeau, $6.50@8.50; bushels: Keiffers, $1.50@2.25; Lawrence, $2.50@3; Seckels, $2@4.25; Anjous, $2.50; Bartletts, $1.75@3.50. As was noted in these columns last week the shortage of sugar has practically stopped the sales of crabapples, quinces and cranberries. Grapes are winding up the season very strong with the Concords selling at $1.30@1.35 per jumbo basket and the ponys 29@30c per basket. Chestnuts are doing better, prices ranging mostly from 15@20c per lb. altho some poor and wormy are selling lower.

Poultry

Supplies of live fowls, chickens and roosters have been fairly plentiful and the demand has not been quite so active and for this reason prices are showing a decline from last week. Live ducks, turkeys, and geese however, continue in moderate supply and under a fair demand the market is showing little or no change. At this writing sales are being made at about the following range of values: Fowls, 26@33c; chickens, 26@32c; old roosters, 21@23c; ducks white Pekins, 30@32c; other varieties 28@30c; geese, 27@30c; turkeys, 35@38c.

Eggs

Supplies of eggs are comparatively light and under a good demand there has been an advance in the market. Strictly fancy new laid eggs are commanding a premium over quotations which are about as follows: Penna. and other nearby current receipts 65@67c; nearby firsts, 67@70c; western firsts 63@65c; western extra firsts, 67c.

LANCASTER PRODUCE MARKETS

Lancaster, Pa., Oct. 27, 1919.

For the first time in five weeks, the egg market broke here this morning a ten-cent range up to eighty-cents per dozen, top, being recorded. Many dozen were moved at the seventy-cent quotation and the supply fairly large. Anticipated decreases in county butchered meats have not come, despite continued drops in wholesale prices at the yards. Nearly all offerings today were abundant. The quotations:

Butter and Eggs.—Creamery butter, 75c per lb.; country butter, 78c; fresh eggs, 70@80c per dozen; ducks eggs, 70@75c; goose eggs, 10c each.

Poultry.—Dressed old chickens, $1.75@$2.50; dressed young chickens, 85c@$1.00 each; no live fowl offerings.

Vegetables.—Corn, 20@25c per dozen; beets, 5c per bunch; beans, 10@12c ½ pk.; lima beans, 20@25c quart; cabbage, 5@10c head; lettuce, 15@25c head; sweet potatoes, 35c ½ peck; potatoes, $1.65@1.75 bushel; do., 30c ½ peck; turnips, 30c ½ peck; spinach, 20c ½ peck; parsnips, 5c box.

Fruits.—Apples, 40@60c ½ peck; pears, 20@25c ½ peck.

Grain Market.—Wheat, $2.20 per bushel; rye, $1.65; oats, 65c; corn, $1.95. Timothy hay, $30 per ton; mixed hay, $28; wheat straw, $10; oat straw, $5.

BALTIMORE PRODUCE

Baltimore, Md., Oct. 27, 1919.

Butter.—Creamery, western fancy, 67@68c; choice, 66@67c; pound prints, 68@69c. Nearby rolls, 44@45c. Dairy prints, 44@45c.

Eggs.—State, Pennsylvania and nearby, 64@65c. Eastern Shore and Virginia, 64@65c. Southern, 62c.

Live Poultry.—Springers, 28@29c lb.; old roosters, 20@21c; old hens, 29c lb.; ducks young, 28@30c; do., poor, 24@25c; guinea fowls, 80@85c.

Grains.—Bag lots by sample, $2.15@2.35. wheat, new, No. 1 red, $2.30 do., No. 3, $2.32; garlicky, $2.32; Corn, $1.82. Oats, standard white, 75@78c; rye, nearby, $1@1.50.

Hay.—No. 1 timothy, $31 ton; do., standard, $30 ton; light clover, mixed, $29@30 ton. Clover, mixed, $28. Tangled rye straw, $14.50. Wheat straw, $12@13. Oat straw, $14@15 ton.

Western Spring Bran, per ton, in 100-pound sacks, $42@43; City Mills Winter Bran, per ton, in 100-pound sacks, $50; brown middlings, per ton, in 100-pound sacks, $55; white middlings, per ton, in 80-pound sacks, $67. Quotations on City Mills feeds are jobbing prices.

NEW YORK PRODUCE

New York City, Oct. 27, 1919.

Butter.—Steady; receipts, 12,670 tubs; creamery, higher than extras, 70½@71c; creamery, extras, 92 score, 70c; firsts, 59@69c; packing stock, current make, No. 2, 47c.

Eggs.—Irregular; receipts, 10,820 cases; fresh-gathered extras, 69@70c; extra firsts, 65@68c; firsts, 61@64c; state, Pennsylvania and nearby western hennery whites, fine to fancy, 93@95c; state, Pennsylvania and nearby hennery whites, ordinary to prime, 70@92c; state, Pennsylvania and nearby hennery browns, 74@76c; do., gathered browns and mixed colors, 70@72c.

Cheese.—Steady; receipts, 6,216 boxes; state, whole-milk flats, current make specials, 32@32½c; do., average run, 31@31¾c; State, whole-milk twins, current make specials, 31½c; do., average run, 31c.

Live Poultry.—Steady; chickens, 22@23c; fowls, 20@25c; old roosters, 19c; turkeys, 30@35c.

Dressed Poultry.—Steady; fowls, 25@39c; old roosters, 22@23c; chickens, 27@46c; turkeys, 35@45c.

Vegetables.—Potatoes, Long Island, $4.25@5 per 165-lb. bag; Jersey No. 1, $3@3.75 bag. Beans, green, $1@3.50 basket; do., lima, $1.50@3.50 basket. Beets, $2@2.50 per barrel. Carrots, $1@1.75 per bbl. Cabbage, $3@7 per 100. Lettuce, 50c@$2.50 basket. Tomatoes, $1@2 per bushel. New Jersey, $1@2 carrier.

Fruit. — Apples, McIntosh, $5@11; Wealthy, $4.50@7.25. Baldwin, $4@7.50; Jonathan, $6@7.50.

PHILADELPHIA LIVE STOCK

Philadelphia, Pa., Oct. 27, 1919.

Receipts of live stock for week ending October 25 were as follows:

	Beef Cattle	Sheep and Lambs	Hogs
Total for Week	2,894	8,211	7,030
Previous Week	3,155	7,423	7,211

Calves.—Receipts of calves last week were 1,338 head against 1,530 head week previous.

Beef Cattle.—Fine stock steady, with exceptional sales of steers noted at a premium over quotations. Calves were steady, with demand fair. Steers, good to choice, $15@15.50; do., fair to good, $13@15; common to fair, $11.50@13; cows, fat, per lb., good to choice, cornfed, 9@11½c; fair to good, 7½@9c; do., common, to fair, 6½@7½c; calves, extra choice, $22@22.50; fair to good, $18@20; common, $12.50@16.50; heavy, $8.50@12.50; Tennessee, choice, $16@18; other southern, $9@13.

Sheep and Lambs.—Demand was fair for desirable stock and values generally were steadily maintained, with moderate supplies. Sheared sheep, wethers, extra, $10.50@11; good to choice, $9@10; medium, $7@8; common, $3.50@5; ewes, fat, heavy, $7.50@8.50; spring lambs, choice, $15@15.50; medium, $13.50@14.50; culls and common, $11@13.

Hogs.—Nearby stock was dull and easier. Western hogs were steady with moderate offerings and a fair demand. Quotations for best western, $16.50; nearby, good, $13@14.

City Dressed Stock.—Trade was quiet in steers, heifers and cows, and prices showed little change. Veal was in good request and firm. Lamb and mutton sold slowly and prices were easier. Hogs were dull and lower. Quotations:

Steers, 19@26c; heifers, 17@23c; cows, 13@19c; calves, city dressed, choice, 28@34c; country dressed, 26@28c; sheep, 16@19c; lambs, spring, 25@27c; hogs, 22c.

LIVESTOCK

Lancaster, Pa., Oct. 27.—Cattle.—Receipts, 8,423 heads, against 9,330 heads last Monday; market dull; prices much lower; many unsold; best grade steers, $14@15.50; medium to good steers, $12.50@14; common to medium steers, $9@11.50; choice to prime heifers, $12@13; good to choice heifers, $11@12.25; fair to good heifers, $10@11 common to fair heifers, $7.50@9; good to prime cows, $9@11.25; fair to good cows, $7.50@9.25; medium to fair heifers, $6.25@7.50; common to medium heifers, $5@6.15; good to choice bulls, $10@11.25; fair to good bulls, $8.25@9.50; common to medium bulls, $8@8.25; good to choice oxen, $9.25@11.50; fair to good oxen, $8.25@9.50; common to medium oxen, $6@8; calves, best grades, $18@21; medium, $15@17; common kinds, $8@10; feeding steers, good to choice, $12@13; medium, $10.50@11.50; common, $8.25@10.25; stock steers, best grade, $10@11.25; medium, $9@10; common, $6@7.75.

Hogs.—Receipts, 811 heads; market slow; prices lower; good to prime, $14@15; light to medium, $12@13; roughs, $12@13.50; stags to sows, $11@12.

East Buffalo, N. Y., Oct. 27.—Cattle.—Receipts, 5,600; good, strong; prime steers, $16.50@17; shipping steers, $15.50@16; butchers, $10@15.50; yearlings, $14@16; heifers, $6@12; cows, $4@10.75; bulls, $7@10.50; stockers and feeders, $6@10; fresh cows and springers, $65@170.

Calves.—Receipts, 1,000; steady; $7@20.

Hogs.—Receipts, 12,800; pigs, 25c lower; others, 25@50c higher; heavy, $13.60@14; mixed, $13.50@13.75; Yorkers, $13.50@13.60; light, do., $13@13.25; pigs, $13; roughs, $11@11.50; stags, $8@9.50.

Sheep and Lambs.—Receipts, 12,000; lambs, $7.50, lower; lambs, $8@14.75; yearlings, $7@11; wethers, $9@9.50; ewes, $3@8; mixed sheep, $8.25@8.75.

Pittsburgh, Pa., Oct. 27.—Cattle lower; supply, 100 loads; prime, $14.25@15.

Sheep.—Steady; supply, 15 doubledecks; prime wethers, $9.50@10; culls and common, $2.50@3.50; lambs, $8@14.50; veal calves, $18@18.50.

Hogs.—Higher; supply, 50 doubledecks; prime heavies, mediums and heavy Yorkers, $13@13.25; light Yorkers, $13@12.25; pigs, $11.75@12; roughs, $10@11.

PHILADELPHIA HAY AND GRAIN

Philadelphia, Pa., Oct. 27, 1919.

Baled Hay and Straw.—Receipts, 96 tons of hay and 2 cars of straw; quiet but steady. Timothy hay—No. 1, $32; No. 2, $28@30; No. 3, $24@27. Clover mixed hay—Light mixed, $28@30; No. 1 mixed, $26@27.

Straw.—No. 1 straight rye, $14.50; No. 2, do., $12.50@13; No. 1 tangled rye, $13; No. 2, do., $13@12.50; No. 1 wheat straw, $12.50@13; No. 2, do., $11.50@12; No. 1 oat straw, $12.50@13; No. 2 do., $11.50@12.

Bran.—Steadily held. We quote car lots, to arrive, including sacks—Soft winter bran, western, in 100-pound sacks, per ton, $45@46. Spring bran, in 100-pound sacks, per ton, $44@45.

Corn.—Yellow, to arrive, $1.53@1.56.

Oats.—No. 2 white, 80½@81c; No. 3, 79½@80c.

NEW YORK HAY AND GRAIN

New York City, Oct. 27, 1919.

Feed.—The market for mill feed was again steady owing to less pressure in the way of offers from the mills. The demand, however, was not active and buyers were disposed to pursue their recent conservative policy.

Quotations: City feed, bran, $44; middlings, $54, in 100-pound sacks; red dog, $68, nominal, in 100-pound sacks; Western spring bran, $43.50; standard middlings, $49; flour middlings, $58; red dog, $68@69, all in 100-pound sacks, 30-day shipment. Oat feed, $30; rye middlings, $52; white hominy feed, nominal, all in 100-pound sacks. Cottonseed oil meal, $75.50; linseed oil meal, $76, in 100-pound sacks.

Hay and Straw.—There is no change in the situation today. Stocks are clearing pretty well at 33d Street shed, under a fair demand and market is generally steady to firm on large baled hay, the small bales are in rather large proportion in the arrivals and are without improvement. Rye straw selling at $15@16, according to location. Oat straw continues very scarce.

Hay.—No. 1 large bales, $35 ton. No. 2, $32@33 ton; No. 3, $28@30; shipping, $26@28 ton. Fancy light clover mixed, $33 ton. Clover, No. 1, mixed, $31@32.

Straw.—Per ton, No. 1 rye, $16; No. 1, oat, $15@16.

Wheat, No. 2 red, $2.37½; No. 2 hard winter, $2.37½.

Corn.—No. 2 yellow, $1.54¾; No. 3 yellow, $1.54¼.

Oats.—No. 2 white, 82½c; No. 3 white, 82c.

Rye.—Export, $1.53½.

PITTSBURGH HAY AND GRAIN

Pittsburgh, Pa., Oct. 27, 1919.

Hay.—No. 1 timothy, $29@29.50; No. 2, $27@28; No. 3, $24@25; No. 1 light mixed, $28@28.50; No. 1 clover mixed, $30@30.50; New No. 2 clover mixed, $26@27.

Straw.—Receipts of long clean oat straw light, demand good. Wheat straw receipts light demand good.

No. 1 oat, $11.50@12; No. 2, $11@11.50; No. 1 wheat, $11@11.50; No. 2, $10.50@11; No. 1 rye, $11.50@12; No. 2, $11@11.50.

Ear Corn.—Receipts and demand are both light, not much trading.

Oats.—Receipts about equal demand. Market steady. No. 1 white, 77@77½c; No. 2, 76½@76¾c; No. 3, white, 75@75½c.

PHILADELPHIA DAIRY MARKET

Philadelphia, Pa., Oct. 27, 1919.

Butter.—Receipts 4,187 tubs. The Produce Exchange was closed and very little wholesale business was transacted. Offerings of fine stock, however, were light and prices were firmly maintained. Quotations follow: Fresh, solid packed creamery, fancy, high-scoring goods, 71@73c; the latter for jobbing sales; extras, 70c; extra firsts, 66@67c; firsts, 57@61c; seconds, 53@56c; sweet creamery, choice and fancy, 72@74c; do., fair to good, 61@69c; ladle packed, as to quality, 48@51c; packing stock, 46@48c; fancy brands of nearby prints jobbing at 76@78c; good to choice, 66@75c; fair, 60@64c.

Cheese.—Prices were firmly maintained. The quotations were as follows: New York whole milk flats, fancy, 33@33½c; fair to good, 31½@32½c; Wisconsin, whole milk flats, fancy, 33@33½c; fair to good, 31@32c; jobbing sales of fancy goods, 34@35c.

NEW YORK MILK MARKET

New York City, Oct. 27, 1919.

Demand has been fair and surplus about the same as the week previous. The November rate for 3 percent milk has been fixed at $3.33 per 100 lbs in 200-mile zone; the 3.05 percent milk is $3.57 and the 4 percent $3.73.

Receipts of milk and cream in 40-quart cans for the week ending October 25th, 1919, were as follows:

Railroad	Milk	Cream
Erie	41,763	3,365
Susquehanna	6,703	166
West Shore	14,644	1,922
Lackawanna	60,814	2,572
N. Y. Central (long haul)	141,806	2,470
Ontario	47,110	1,968
Lehigh Valley	44,821	1,177
New Haven	6,634	86
Pennsylvania	12,625	503
Other Sources	6,000	250
Totals	382,920	14,419
Same week last year	369,363	9,931

CHICAGO CORN HIGHER

Wet Weather and Market and Hog Price Upturns the Factors

Chicago, Ill., Oct. 27.—Corn jumped in value today to the highest point reached since September 24 for the December delivery. Unwelcome wet weather as well as upturns in the stock market and in hog quotations were chiefly responsible. The close was unsettled, ⅝c to 1⅝c net higher, with December $1.27¼ to $1.27⅜ and May, $1.23⅝ to $1.23⅞. Oats finished unchanged to ¼c up.

CLOVERSEED

Toledo, O., Oct. 25, 1919.

Cloverseed.—Prime cash and October, $31.25; December, $29.80; January, $30; February, $30.20; March, $29.80.

Alsike.—Prime cash, $29.45; October, $29.45; December, $29.50; March, $29.65.

Timothy.—Prime, cash, 1917, $5.35; cash 1918, $5.35; cash, 1919, $5.60; October, $5.60; December, $5.65; March, $5.77; April, $5.75.

TOBACCO MARKET

Despite reports to the contrary it seems an assured fact that practically none of the new crop has been sold except hail-cut and rusty tobacco, the larger part of, which has been contracted at prices ranging from $8 to $12 per cwt. which is considered a fair price for such product. Prices which will be expected for sound tobacco are yet somewhat formative, but it is thought will be about $10@20 cwt. for average crops. The inquiry was greater than heretofore giving rise to opinion that sales will open in the near future. At a meeting of the growers' association it was agreed that the present crop is curing nicely and that it will be generally good in quality. The yield per acre is expected to be fair to good but there is evidently a great shortage in the number of acres. This meeting was perturbed somewhat by the alleged attempt of a prominent member who is a tobacco broker to foist upon the organization a certain plan of buying and warehousing the present crop, which plan it seems did not meet the approval of those present resulting in a somewhat brusque and unkind refusal to consider the same. The meeting was favored with the presence of a representative of the bureau of markets who after referring to the highly speculative nature of the tobacco crop dwelt at length upon the practicability of marketing thru bonded warehouses as is now being promoted in the Connecticut valley. Such a method would include the issuing of receipts for deliveries and an arrangement for bank loans upon such tobacco. He emphasized the importance of action united as compared with individual action provided the same does not violate the Sherman act.

Characteristics of the Berkshires

The Berkshire hog, with its stylish carlage, sprightly step, strong, well-arched back, short snout, dished face, upright ears and uniform black and white markings is styled the "aristocrat of the show-ring." The breed generally has good width of shoulder, a broad back, well-sprung rib and good thickness thru the rump and ham. Good specimens of the breed produce ideal hams and well-marbled sides. In well-bred animals of the breed the feet and legs are all that could be desired; the bone being sufficiently strong to support the body.

The ideal markings are black body with white markings on each foot and the tip of the tail. Small white markings on the arm are not objected to, altho splashes of white on the body are sufficient to condemn an animal in the eyes of many judges. An absence of any of the characteristic white markings also constitutes an objection in the eyes of most judges. Unless some of the markings are glaringly deficient it will prove unwise for the average breeder to sacrifice animals possessing superior type and general appearance.

The breed derived its name from England, but very little is known of its early history. Early importations were coarser and the color markings less uniform than than at the present time, altho at all times the Berkshire has had a reputation of producing a superior quality of meat. The early history of the breed in America dates back to 1823 when John Brentell of New Jersey made an importation. Inflated prices and questionable methods employed by early breeders and speculators did the breed great injury. Eventually however, its real merit overcame the prejudice until today the Berkshire ranks as one of the leading breeds of the United States.

In the United States the leading breeders of Berkshires have maintained size and quality and developed a much better type than that possessed by the animals imported from England. These results are partially due to methods of feeding which tend to produce a more compact, smoother animal than those from a country where less fat-producing feeds are used and where the tendency is toward the production of fancy hams and bacon.

The Berkshire breed is well suited for supplying the market with fat hogs which give good hams and shoulders, and a carcass well-marbled with fat and lean meat. While it cannot compete successfully with the bacon breeds in the production of fancy bacon the breed ranks well from the standpoint of early maturity, attaining good weights at an early age and fattening quickly at any period of its growth. In the matter of economy in the production of pork per unit of feed it is safe to say that it has no superior. The sows are prolific and capable of suckling large litters. The males are prepotent and cross well with other breeds when an invigoration of fresh blood is needed to improve feeding qualities.

The following is the standard of excellence adopted by the American Berkshire Association:

Color—Black, with white on feet, face and tip of tail, and an occasional splash on the arm—4 points. Face and Snout.—Short; the former fine and well dished, and broad between the eyes—7 points. Eye.—Very clear, rather large, dark hazel or gray—2 points. Ear.—generally almost erect, but sometimes inclined forward with advancing age; medium size, thin and soft—4 points. Jowl.—Full and heavy, running well back on neck—4 points. Neck.—Short and broad on top—4 points. Hair.—Fine and smooth; medium thickness—3 points. Skin.—Smooth and pliable—4 points. Shoulder.—Thick and even, broad on top, and deep thru chest—7 points. Back.—Broad, short and straight; ribs well sprung, coupling close to hips—8 points. Side.—Deep and well let down, straight on bottom lines—6 points. Flank.—Well back and low down on leg, making nearly straight line with lower part of side—5 points. Loin.—Full and wide—9 points. Ham.—Deep and thick, extending well up on back and holding thickness well down to hock—10 points. Tail.—Well set up on back; tapering and not coarse—2 points. Legs.—Short, straight, and strong, set wide apart, with hoofs erect and capable of holding weight—5 points. Symmetry.—Well-proportioned thruout, depending largely on condition—6 points. Condition.—In a good healthy, growing state, not over-fed.—5 points. Style.—Attractive, spirited, indicative of thorough breeding and constitutional vigor—5 points. A total of 100 points of perfection.

Grand Champ. Berkshire Sow at National Swine Show, "Lady Premier" Bred at Piping Brook Farm, Conn.

Grand Champ. Berkshire Boar at National Swine Show, "Fairview Ruler" From Piping Brook Farm, Conn.

Keep the appetite good. To do this, is the fine art of feeding; it cannot be taught—it must be learned by practise. Fowls do not eat the same amount of feed each day.

SAVAGE

Ask Your Father

if some of his happiest memories do not center around boyhood days spent with his rifle in field and forest.

He doesn't want you to grow up without such golden days.

Some day he is going to bring home a rifle, and is going to train you fully in its use and care.

He is not going to let anyone else do this ---he wants the fun of it himself---it is part of your education he need not delegate.

Your future will be safeguarded by such knowledge, and you will have merry times together.

The sturdy, accurate Savage Junior Rifle will please you both. See it at your dealers or write for a catalogue.

SAVAGE ARMS CORPORATION
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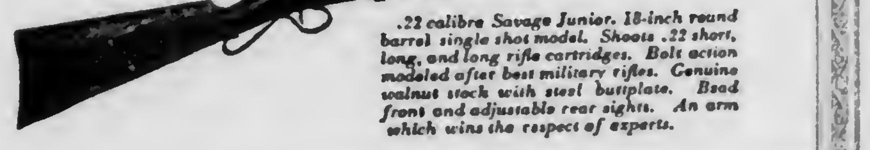

.22 calibre Savage Junior. 18-inch round barrel single shot model. Shoots .22 short, long, and long rifle cartridges. Bolt action modeled after best military rifles. Genuine walnut stock with steel buttplate. Bead front and adjustable rear sights. An arm which wins the respect of experts.

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WITH SEMI-SOLID BUTTERMILK

All You Want! Just When You Want It! BEST HOG FEED ON EARTH!

SEMI-SOLID BUTTERMILK is pure creamery buttermilk with NOTHING added—nothing taken away but the water. NOT MODIFIED by the addition of SULPHURIC ACID or any other preservative. Its own natural LACTIC ACID keeps it fresh.

We Guarantee Every Barrel of It

Also guarantee that you will be satisfied with results from feeding it.

Our SEMI-SOLID BUTTERMILK is the only buttermilk on the market that you can drink yourself or use to make batter-cakes for your table.

Iowa Agricultural College, Ames, Iowa, fed two groups of hogs, same number, same litter—record per 100 lbs. gain in weight.

	Days	Corn	Meat Meal	Wheat Middlings	Weight
No. 1	218	442 lbs.	33 lbs.	31 lbs.	296 lbs.
No. 2	156	148 lbs.	9 lbs.	14 lbs.	299 lbs.
Gain or Saving	62	294 lbs.	24 lbs.	17 lbs.	3 lbs.

No. 1 had no butter milk. No. 2 had all they would drink. You can do as well or better.

Used by the Packers and other feeders in CAR LOTS.

Feed Your Hogs and Poultry SEMI-SOLID BUTTERMILK

It keeps them healthy and gets them to market earlier.

SEMI-SOLID BUTTERMILK is a safe feed—sterilized and pasteurized.

A 500-lb. barrel is equal to 1,000 gallons of buttermilk.

To save you freight plants have been built in several different states.

Why use a substitute or Modified Buttermilk? Use SEMI-SOLID BUTTERMILK—it's pure and unadulterated. Send your order today.

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LINCOLN, NEB.

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ENGINES

Here is your chance. Buy one of the famous Galloway Farm Engines or Spreaders at a special low price. Get in on this 30-day offer. Save money. When old winter freezes, snows and blows, there are many jobs that a Galloway Engine will relieve you of and it works in any weather. Built for long and hard service. Gives 7 actual horsepower for the price of 6. Portable or stationary. Big bore, long stroke, heavy-weight, every part standardized and interchangeable. With a Galloway "frostproof" Engine this winter, you'll do your work in less time and with less effort than ever before.

SPREADERS

Note these low factory prices below—they cannot be matched anywhere. Fine quality spreaders never sold for such a low figure before and never will again.

With Whirlwind Distributor

The Galloway new whirlwind distributor absolutely pulverizes every bit of manure and scatters it six to seven feet, saving time and labor in spreading. Remember that Galloway has 11 other great features that enable the Galloway Spreader to spread more land with less effort—less horse and man power—than any other method known.

Factory Prices

$154.75 For the New No. 8

$147.25 For the New No. 5

$139.75 For the New No. 1A

Write Galloway Now

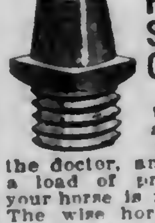
Don't let this 30-day low price opportunity slip by. Get your order in early. Have your engine for Winter work and your Spreader now for immediate or next Spring's work and save big money on both. Write today and get the full facts with complete descriptions of these bargain price, quality implements. Near by shipping points save you on the freight. Write NOW!

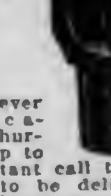
WM. GALLOWAY, Pres.
Wm. Galloway Co.
197 Galloway Station
WATERLOO, IOWA

A HORSE CAN TRAVEL WHERE AN AUTOMOBILE CANNOT GO

Often in the deep snows of winter an automobile cannot get through the drifts, but the horse can travel anywhere if he can secure footing. There is just one thing will insure safe footing on any road anywhere any time, no matter how icy or slippery, and that is the

Neverslip Red Tip Horse Shoe Calk





Whatever the occasion; a hurried trip to the doctor, an important call to town, a load of produce to be delivered—your horse is ready when you are ready. The wise horse owner will go to his horse shoer early and have the safe, reliable RED TIP SHOES put on. Then he can laugh at the weather. No sleet storm, no sudden freeze will hold him back. His sharp, strong RED TIP CALKS can be adjusted in 20 minutes, and he is ready for the road. Avoid substitutes. LOOK FOR THE RED TIP

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New Brunswick, N. J.

HAY

W. D. POWER & CO. 601 W. 33 St., New York, are the largest handlers of commission hay in greater New York; if you have hay to dispose of communicate with them.

HAY

KEZIAH COFFIN

By JOSEPH C. LINCOLN

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SYNOPSIS

Keziah Coffin, a good-natured widow, is packing up to leave the fishing village to go to Boston, her brother having died and left her alone. Grace Von Horne, ward of Eben Hammond and young friend of Keziah, is assisting her. They are discussing the coming of the new minister for the "Regular" Church, to which denomination Keziah belongs. Grace is a member of the "Come-Outers," a rival sect. Between the two a jealous rivalry exists. Eben Hammond calls and induces Keziah to become housekeeper for the new and single minister. She accepts and Grace goes with her to prepare the house for his coming. The new minister arrives and he and Keziah become friends at once. Keziah proceeds to make him acquainted with local conditions—especially the strained relations between the two sects. Mrs. Coffin advises him that if he wishes to steer an easy course he must recognize the "classes" of the community, and also not to fraternize with the "Come-Outers." In spite of the warning he visits the "Come-Outer" meeting one evening, is recognized and is preached at and prayed for. Grace Van Horne and the Minister meet after the meeting in a rainstorm and he sees her home. The "Packet" arrives in port, bearing Nat, the girlhood lover of Keziah.

John Ellery picked his way homeward thru the puddles and the pouring rain.

He found Keziah in the sitting room, seated by the table, evidently writing a letter. She looked tired and grave—for her.

"Well!" she exclaimed as he entered. "I guess you're soppin' now, sartin sure. There's a light in your room. Take off your wet things and throw 'em down to me, and I'll dry 'em in the kitchen. Better leave your boots here now and stand that umbrella in the sink. The kettle's on the stove; you'd better have somethin' hot—ginger tea or somethin'. I told you not to go out such a night as this. Where in the world have you been?"

The minister said he would tell her all about it in the morning. Just now he thought he had better go up and take off his wet clothes. He declined the ginger tea, and, after removing his boots, went upstairs to his room.

Keziah dipped her pen in the ink and went on with her letter.

"I inclose ten dollars," she wrote. "It is all I can send you now. More than I ought to afford. Goodness knows why I send anything. You don't deserve it. But while I live and you do I can't——"

The minister called from the landing.

"Here is my coat," he said. "The cuffs and lower part of the sleeves are pretty wet. By the way, the packet came in tonight. They didn't expect her so soon on account of the fog. There was a passenger aboard whom I think must be that Nathaniel Hammond you told me of."

Keziah's pen stopped. The wet coat struck the hall floor with a soft thump. The tick of the clock sounded loud in the room. A sheet of wind-driven rain lashed the windows.

"Did you hear?" called the minister. "I said that Nathaniel Hammond, Captain Eben's son, came on the packet. I didn't meet him, but I'm sure it was he. Er—Mrs. Coffin, are you there? Do you hear me?"

The housekeeper laid the pen down besides the unfinished letter.

"Yes," she said, "I hear you. Good night."

For minutes she sat there, leaning back in her chair and staring at the wall. Then she rose, went into the hall, picked up the coat, and took it out into the kitchen, where she hung it on the clotheshorse by the cook stove. After a while she returned to the table and took up the pen. Her face in the lamp-light looked more tired and grave than ever.

It was a long time before John Ellery fell asleep. He had much to think of—of the morrow, of the talk his rash visit to the chapel would cause, of the explanation he must make to Captain Elkanah and the rest. But the picture that was before his closed eyes as he lay there was neither of Captain Elkanah nor the parish committee; it was that of a girl, with dark hair and a slim, graceful figure, standing in a lighted doorway and peering out into the rain.

CHAPTER VI.

In Which Old Friends Meet

When Ellery came down to breakfast the rain was over, the wind had gone down, and the morning sunshine was pouring in at the dining-room windows. Outside the lilacs were in bud, the bluebirds were singing, and there was a sniff of real spring in the air. The storm was at an end and yet the young minister was conscious of a troublesome feeling that, for him, it was just beginning.

However, he had determined while dressing to make a clean breast of it to his housekeeper—a nominally clean breast, that is. There were other things he would not tell her, some that he would not speak of to anyone, the picture in the doorway for instance. True, it was only a picture and of no moment, but it was pleasant to remember. One of the very few pleasant things connected with the previous evening.

So, as they sat opposite each other at the table, he began his confession. The muffins scorched in the oven and the coffee pot boiled over as he told his story, for Keziah was too much interested to think of trifles. Interested and astunded, for, since Come-Outers had been Come-Outers and the split in the society took place, no Regular minister had crossed the threshold of a seceder's dwelling, much less attended their services and walked home with a member of their congregation. She knew what this amazing procedure was likely to mean, if her parson did not.

"Well!" she excalimed when the recital was finished. "Well!"

"I—I'm afraid I was too hasty," observed Mr. Ellery thoughtfully. "Perhaps it would have been wiser not to have done it."

"Perhaps 'twould. Yes, I wouldn't wonder a mite."

"It will be talked about some, I suppose. Don't you think so?"

"Some, yes."

"I'm afraid some of my own people may think it queer."

"Queer! Say, Mr. Ellery, you remind me of a half-breed Portugee feller—half Portugee and a half Indian—that went to sea with my father, back in the old days. He hardly ever spoke a word, mainly grunted and made signs. One day he and another fo'mast hand went aloft in a calm to do somethin' to the tops'lr. The half-breed—they called him Billy Peter and he always called himself that—was out an the end of the yard, with his foot on the rope underneath, I forget the name of it, when the tarred twine he had for a shoe string caught. Tryin' to get it loose it broke sudden, his shoe pulled off, he lost his balance and fell. He gabbed at the yard, saved himself for a second, fell again, grabbed the next yard, then a rope and so on down, grabbin' and pullin' all the way. First his shoe hit the deck, then his sheath knife, then a piece of rope, and finally himself, landin' right on top of the Irish cook who was goin' aft from the galley with father's dinner.

"There was the greatest racket you ever heard, pans fallin', dishes smashin', men yellin', and the cook swearin'. Father run on deck, thinkin' the ship was dismasted. He found the cook and Billy Peter sittin' in the middle of the mess, lookin' at each other. Neither was hurt a mite. The mates and the crew, part of 'em, was standin' starin' at the pair.

" 'For Heaven sakes!' says father; 'what happened?'

"The half-breed looked up and rubbed his head. 'Ugh!' says he, 'Billy Peter bust his shoe string.'

"The cook, his name was O'Neil, looked at him disgusted. 'Well, begorra!' says he, 'Billy Peter, you don't exaggerate none, do ye! It's a good thing both of 'em didn't bust or we'd have foundered.'

"You remind me of Billy Peter, Mr. Ellery, you don't exaggerate. Queer? Some folks think your goin' to that meetin' last night queer? At this moment one half of Trumet is talkin' about it and runnin' out to tell the other half. I guess I'd better hurry up with this breakfast. We're goin' to have callers."

Strange to say, however, this prophecy of early morning visitors did not prove true. Nine o'clock, then ten, and no visitor came to the parsonage. Mrs. Coffin affirmed that she did not undertsand it. Where was Didama? Where Lavinia Pepper? Had the "Trumet Daily Advertiser" suspended publication?

At half past ten the gate slammed. Keziah peered from the window.

"Humph!" she ejaculated. "Here comes Elkanah and he's got storm signals set, by the looks. He's comin' after you, Mr. Ellery."

"Very well,' was the calm reply; "let him come."

"What are you goin' to say to him?"

"Nothing, except that I did what I considered right at the time. Show him into the study, Mrs. Coffin, please."

Captain Daniels marched to the dining-room door, his gold-headed cane marking time like a drumbeat. He nodded curtly to Keziah, who answered the knock, and stepped across the threshold.

"Hum—ha!" he barked. "In the minister—hum—ha! is Mr. Ellery in?"

"Yes, he's in."

"Tell him I want to see him."

The housekeeper announced the visitor.

"He's as sour as a skimmin' of last week's milk," she whispered. "Don't be afraid of him, tho."

"Oh, I'm not. Show him in."

"All right. Say, Mr. Ellery, it's none of my business, but I wouldn't say anything about your seein' Grace home. There's none of his business, either, or anybody else's."

The head of the parish committee stalked into the study and the door closed behind him. A rumble of voices in animated conversation succeeded.

Mrs. Coffin went out into the kitchen and resumed her business of making a dried-apple pie. There was a hot fire in the stove and she opened the back door to let in the fresh air. She worked briskly, rolling out the dough, filling the deep dish, and pinking the edges of the upper crust with a fork. She was thinking as she worked, but not of the minister or his visitor.

She put the pie in the oven and set the damper. And, as she knelt by the stove, something struck her lightly on the back of the neck. She looked up and about her, but there was no one in sight. Then she picked up the object which had struck her. It was a cranberry, withered and softened by the winter frosts.

She looked at the cranberry, then at the open door, and her eyes twinkled. Running quickly to the threshold she peered out. The back yard was, apparently, empty, save for a few hens belonging to near neighbors, and these had stopped scratching for a living and were huddled near the fence.

"Hum!" she mused. "You rascal! Eddie Snow, if it's you, I'll be after you in a minute. Just because you're big enough to quit school and drive store wagon is no reason why I can't—Hey? Oh!"

She was looking down below the door, which opened outward and was swung partly back on its hinges. From under the door projected a boot, a man's boot and one of ample size.

Keziah's cheeks, already red from the heat of the stove, reddened still more. Her lips twitched and her eyes sparkled.

"Hum!" she said again. "They say you can tell the Old Scratch by his footprints, even if you can't smell the sulphur. Anyhow, you can tell a Hammond by the size of his boots. Come out from behind that door this minute. Ain't you ashamed of yourself?"

The owner of the boot stepped forth from behind the door and seized her by both hands.

"Halloo, Keziah!" he cried joyfully. "My, but it's good to see you."

"Halloo, Nat!" said Keziah heartily. "It's kind of good to see you, too."

The rest of him was in keeping with his boots. He was big and broad-shouldered and bearded. His face, above the beard, was tanned to a deep reddish brown, and the corners of his eyes were marked with dozens of tiny wrinkles. He was dressed in blue cloth and wore a wide-brimmed, soft felt hat. He entered the kitchen and tossed the hat into a corner.

"Well!" he exclaimed. "Why don't you act surprised to see a feller? Here I've been cruisin' from the Horn to Barnegat and back again, and you act as if I'd just dropped in to fetch the cup of molasses I borrowed yesterday. What do you mean by it?"

"Oh, I heard you'd made port."

"Did, hey? That's Trumet, sure pop. You ain't the only one. I sneaked off acrost lots so's to dodge the gang of neighbors that I knew would be sailin' into our yard, the whole fleet loaded to the gunwale with questions. Wanted to see you first, Keziah."

"Yes. So, instead of callin' like a Christian, you crept up the back way and threw cranberries at me. Ain't you ashamed of yourself?"

"Not a mite." He took a handful of the frost-bitten berries from his coat pocket and inspected them lovingly. "Ain't they fine?" he asked, crunching two or three between his teeth. "I picked 'em up as I came along. I tell you, that's the home taste, all right."

"Don't eat those frozen things. They'll give you your never-get-over."

"What? Cape Cod cranberries! Never in the world. I'd rather eat sand down here than the finest mug my steward can cook. Tell you what I'll do, tho; I'll swear off on the cranberries if you'll give me a four-inch slice of that pie I saw you put in the oven. Dried-apple, I'll bet my sou'wester. Think you might ask a feller to sit down. Ain't you glad to see me?"

Mrs. Coffin pulled forward one of the kitchen chairs. He seated himself on it and it groaned under his weight.

"Whew!" he whistled. "Never made to stand rough weather, was it? Well, ain't you glad?"

Keziah looked at him gravely.

"You know I'm glad, Nat," she said.

"So? I hoped you would be, but I did want to hear you say it. Now you come to anchor yourself and let's have a talk. I've been countin' on it ever since we set tops'ls off Surinam."

The housekeeper took the other chair.

"How are you—" she began. He stopped her.

"S-shh!" he interrupted. "Don't say anything for a minute. Let me look at you. Just as clean and wholesome and good-lookin' as ever. They don't make girls like that anywhere else but down on this old sand bar. Not a day older, by the jumpin'—"

She held up her hand.

"Hush, Nat," she protested; "don't talk foolish. Girl? Not a day older? Why, if feelin's count for anything, I'm as old as Methusaleh. Haven't I had enough to make me old?"

He was grave immediately.

"I beg your pardon, Keziah," he said. "I'm a dough head, that's a fact. I hadn't forgot about Sol, but I was so glad to be home again and to see dad and Grace and the old town and you that everything else flew out of my mind. Poor Sol! I liked him."

"He liked you, too. No wonder, considerin' what you did to——"

"Belay! Never mind that. Poor chap! Well, he's rid of his sufferin's at last. Tell me about it, if you can without bringin' all the trouble back too plain."

So she told him of her brother's sickness and death, of having to give up the old home, and, finally, of her acceptance of the housekeeper's position. He listened, at first, with sympathy and then with suppressed indignation.

"By the jumpin' Moses!" he exclaimed. "And Elkanah was goin' to turn you out of house and home. The mean, pompous old——"

"Hush! hush! he's in there with Mr. Ellery."

"Who? Elkanah?"

"Yes; they're in the study."

"By the jumpin'— Let me talk to him for a few minutes. I'll tell him what's good for his health. You just listen."

He rose from the chair, but she made him sit down again.

"No, no," she protested. "He wasn't to blame. He had to have his rent and I didn't feel that I could afford to keep up a whole house, just for myself. And, besides, I ought to be thankful to him, I suppose. He got me this place."

"He did?"

(Continued Next Week.)

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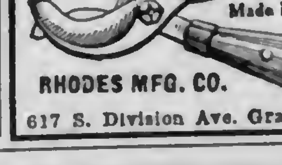

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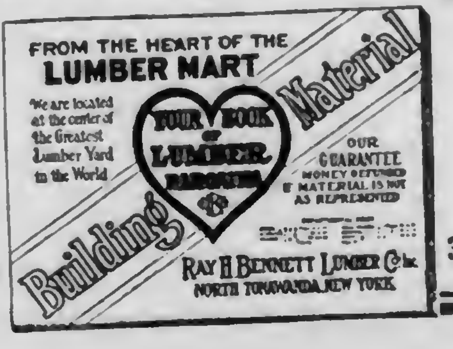

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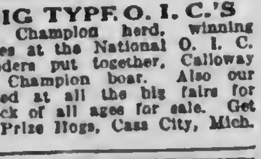

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Veterinary

Conducted by W. C. Fair, V. S.

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Stocking.—Since I commenced to stable my horses two of them stock in both hind legs. Neither of them go lame and all the swelling leaves soon after they travel a mile or two. What can be done for them? H. M., Meadville, Pa.—Healthy horses very often stock when first stabled, at this season of the year, if you will not allow their bowels to become too costive, also keep their kidneys active they will soon cease to stock. Give each horse a teaspoonful acetate of potash in feed or in drinking water every evening, this will stimulate kidney action. Bandage legs in cotton, this will help to keep them from stocking. Hand rub hind legs to stimulate the sluggish glands.

Indigestion.—Several of my horses are not thriving as well as I would like to have them, their coats are dry and rough, but I fail to detect any symptoms of sickness in any of them. They are worked on farm during the day, fairly well fed and run out night time. A. J. L., Enlow, Pa.—Perhaps you should change their food supply, as the weather gets cool, increase their feed. Mix equal parts powdered gentian, red cinchona, salt and cooking soda. Give each horse a tablespoonful at dose in feed 2 or 3 times a day.

Curb.—Have a two-year-old colt that went lame one week ago and in looking him over I find a bunch on back part of hock joint, which when pressed hard causes him to flinch. What ever it is, it is causing considerable lameness. H. H. K., Park Hill, Pa. — Doubtless your colt sprained his leg, the ailment is called curb. Give him rest, clip off hair and apply one part red iodide mercury and 8 parts fresh lard, every week or ten days, and he will soon travel sound.

Cow Pox.—Every one of my six cows have udder trouble, the bag is covered with small sores which are first inflamed, sometimes open, then a scab forms. I find it troublesome to milk them. What can be done for them? C. W. M., Popes Creek, Md.—Dissolve ½ lb. hyposulphite of soda in one gallon of clean water and apply to udder and sore teats twice a day. When the scabs appear to dry and harden, apply one part oxide of zinc and six parts vaseline once or twice daily.

Indigestion.—Vomiting.— Had a cow that came fresh last May, she seemed to be all right for 3 months then she commenced to vomit, her bowels were costive. I gave her epsom salts, but she has gradually lost flesh. Our local veterinary treated her for indigestion and he thot soon as her bowels commenced to work properly she would be better. Now her bowels act all right, she eats plenty feed, gives nice mess of milk, but occasionally vomits. Tell me, is condensed milk good food for young pigs? J. B. B. Medford, N. J.—Vomiting in cattle is not of common occurrence, however, it does sometimes follow indigestion, and in some cases can be traced to a partial closure of the opening into the second stomach or to a distention of the esophagus. I have found it to occur when there was a cancerous disease of the fourth stomach, and experimentally it has been shown that a suspension of digestion or great derangement of the fourth stomach produces considerable nervous disorder of the paunch and sometimes vomiting or attempt to vomit follows. The treatment should consist in feeding easily digested food, with plenty water. Fear and excitement, chasing, or hurrying animals after eating heartily, is apt to bring on vomiting. As a rule treatment is not successful. Mix equal parts ginger, gentian, bicarbonate of soda and salt, give her one tablespoonful at dose in feed 2 or 3 times a day. Select the kind of feed which seems to agree with her. Condensed milk is fairly good food for young pigs.

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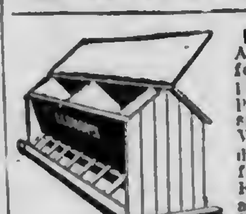

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For Sale! Shropshire and 1 Yearling Rambouillete ram. Also large ram lambs, both breeds. 6 growthy O. I. C. sows, April and May farrow. Stock reg. H. C. Beardsley, Montour Falls, N.Y.

SHROPSHIRE YEARLINGS AND RAM LAMBS of wool-mutton quality. Also O. I. C. boar pigs of April farrow. C. P. ANDREWS, Dansville, Mich.

REGISTERED SHROPSHIRE RAM LAMBS
Some ready for light service. Price right.
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Miscellaneous

HAY AND POTATOES
Poultry and all produce wanted at market prices. Good, steady, active demand. GIBBS & BRO., 325 N. FRONT STREET, PHILADELPHIA, PA.

Ayrshires, Percherons and Berkshires
We have what you want.
Crestmont Farm, Sunbury, Pa.

PENNS VALLEY STOCK FARM
Percherons, Berkshires, Holsteins
"Young Service Boars, pigs either sex."
W. F. RISHEL, CENTRE HALL, PA.

WANTED Nuts (all kinds), calves, poultry, fancy eggs and Hot House lambs.
WM. H. COHEN & CO.,
232 Washington Street, New York City.

Near-By Stock Farm Offers Reg. Ayrshire cattle; Reg. Berkshire pigs, all ages; White Wyandottes, all the most popular blood lines. J. A. McMAHAN, Pottsgrove, Pa.

Chester White Hogs, All Ages
Shorthorn Bulls. R. L. MUNCE, Canonsburg, Pa.

For Sale: Registered C. W. gilts and serviceable boars and pigs. Also Jersey Bulls, all ages. J. A. ROAK, NEW CASTLE, PA. R. 4.

BROOME COUNTY NOTES

We are having quite a little rain lately. It was badly needed as many wells were dry and streams were low. October 7th we had our first freeze, a hard one; ice one-sixteenth inch thick forming on standing water. The first week in October was like summer, the thermometer standing at 86 degrees in the shade; several mornings.

Potatoes are turning out splendidly in some fields; others hardly worth digging. They are selling at $1.25 per bushel. Eggs bring 68 cents a dozen. Butter 62@63 cents per pound. The yield of grapes around here was very large and of fine quality.

Apples are scarce, so much so that the market reports for Binghamton do not give any price on them. They bing $1.50@2 for windfalls and $3.50@4 a bushel for picked ones. Pigs are selling much cheaper than a month ago and nearly every one seems anxious to sell, as feed costs so much. Oats are nearly all threshed and have proved a good crop. More winter wheat has been sown than usual and is looking splendid. Prices on beef cattle have dropped tho the farmer can not see any signs of it when buying fresh beef at the market. Chicken thieves are numerous, and there are many cattle out in back pastures being killed, and carried off for sale by bold thieves. The Cloverdale Farms Company has offered a reward of $50 for information leading to the arrest and conviction of the parties who killed three fine heifers, they had out in pasture. In this case only the hides were taken the skinned carcasses being covered over with leaves and brush and left in the woods by the thieves. At another place they took a calf away, dressed it and took both hide and meat leaving the head and entrails where the owner found them. Many orchards are being raided in day light when the owners are away from home. Sometimes they stop and try to buy chickens, apples, etc., then come back at night and help themselves. Farmers are putting their young stock in the barn and locking them in nights for safety.—C. H., Broome County, N. Y.

THE UNION COUNTY FAIR

The Union County Fair had a good attendance the last two days, but the downpour of rain Tuesday and Wednesday prevented the horse races and made it impossible for many farmers to get their exhibits of grains and fruit in place.

F. E. Brown had on exhibition a display from his 34 acre field of corn and pumpkins that attracted considerable attention. The corn was planted the first week in June on sod ground which had been in meadow for nine years. Some of the stalks on exhibition were nearly 15 feet high and some of the ears weighed over two pounds. A portion of the field yielded at the rate of 200 bushels of ears to the acre. The corn is a yellow variety with long ears. The growth of the stalks was at the rate of more than two inches a day for each day during the growing season. Several cow sales are being held at Brook Park every week, and one big Holstein cow with a calf at her side brought $233, and a Holstein springer which would milk 60 pounds of milk a day sold for $323. Many farms are changing hands this fall.—J. N. Glover, Union Co., Pa.

COOPERATION IN WISCONSIN

The remarkable growth of the co-operative movement in Wisconsin is illustrated by a bulletin issued by the agricultural station at the University of Wisconsin. The following facts contained in the pamphlet illustrate the strength of the idea.

Wisconsin is the leading state in agricultural co-operation, the annual business amounting to $62,646,000. The Grange has a membership of 2,200 in Wisconsin. The American Society of Equity is stronger in this state than anywhere else. Forty-five percent of the eighty-three creameries in the state are co-operative. Thirty-seven of the 1929 cheese factories are co-operative. A beginning has been made in the co-operative market of city milk.

Co-operative feed elevator and produce companies handle large quantities of commodities each year.

The Sweetest Story Ever Told

"Tell me, do you love me? Whisper softly, sweetly, as of old,—
Tell me that you love me, for that's the sweetest story ever told"

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NATIONALLY PRICED
Three models, all playable by hand or by roll, sold at the same prices to everybody everywhere in the U. S. freight and war tax paid. Price branded in the back of each instrument at the factory:

White House Model $675
Country Seat Model 585
Suburban Model 495

Gulbransen Trade Mark

YOU need think of nothing but the song and the joy of singing it—if you have a Gulbransen Player-Piano.

The Gulbransen is so Easy to Play. It seems to understand. It responds to your wishes. It helps you tell your story—sympathetically and without effort.

The words to be sung each moment are always before your eyes as the roll unwinds—printed on the roll. You cannot "lose the place." No notes to read; no fingering to practice. The Gulbransen does all that for you—and makes no mistakes.

The pedals act so gently that a tiny baby once played the Gulbransen (as shown in the picture at the left) and gave us the idea for our trade mark.

You have never tried a player that is so responsive to the lightest pedal touch. Or one from which you can get such delicacy of expression.

If you would love to sing without the drudgery of playing, go in and try a Gulbransen at our dealer's store.

You'll know him because he shows the Baby at the Pedals in his window and newspaper advertising. Or, write us for his address and our catalog.

These love songs and thousands more are ready for you in player-rolls. Our dealer has them:

A Little Love, a Little Kiss
Somewhere a Voice Is Calling
The Sunshine of Your Smile
When You Look in the Heart of a Rose
I'm Sorry I Made You Cry
Love's Old Sweet Song
The Sweetest Story Ever Told
Dearie
Sweet Adeline
A Perfect Day
Sweetheart
The Rosary
Till We Meet Again
I Love You Truly

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(Pronounced Gul-BRAN-sen)
Player-Piano

THE BEST LINIMENT
OR PAIN KILLER FOR THE HUMAN BODY
Gombault's
Caustic Balsam
IT HAS NO EQUAL

For the Human Body —It is penetrating, soothing and healing, and for all Old Sores, Bruises, or Wounds, Felons, Boils, Corns and Bunions CAUSTIC BALSAM has no equal as a Liniment.

We would say to all who buy it that it does not contain a particle of poisonous substance and therefore no harm can result from its external use. Persistent, thorough use will cure many old or chronic ailments and it can be used on any case that requires an outward application with perfect safety.

A Perfectly Safe and Reliable Remedy for
Sore Throat
Chest Cold
Backache
Neuralgia
Sprains
Strains
Lumbago
Sore Lungs
Rheumatism
and
all Stiff Joints

REMOVES THE SORENESS—STRENGTHENS MUSCLES
Cornhill, Tex.—"One bottle Caustic Balsam did my rheumatism more good than $120.00 paid in doctor's bills." OTTO A. BEYER.
Price $1.75 per bottle. Sold by druggists, or sent by us express prepaid. Write for Booklet R.
The LAWRENCE-WILLIAMS COMPANY, Cleveland, O.

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GEO. E. LONG
President

The Ottawa Log Saw takes all the back aches and work out of wood cutting. One man and the Ottawa can do as much as ten, with cross cut saws, could do the old way. Mounted on truck wheels to make it easy to move to logs and from cut to cut, without stopping engine. Thousands in use—every owner perfectly satisfied. Pays for itself in short time. When not sawing can be used to run pumps, mills, feed cutters and other machines.

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Dependable friction clutch on saw drive. Saves more time in doing the work than any other power drag-saw. Built to do hardest work and give lasting satisfaction. Nothing complicated. Engine starts without cranking.

Free Book Write at once for full description of this great work saver and low direct-to-you price. A post card brings this big book.

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HAY Ship To The Old Reliable House
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Rich Michigan Farms Low prices. Easy terms. STAFFELD BROTHERS, 15 Merrill Building, Saginaw, Michigan.

Less Work More Milk

Two pounds of milk may seem a small amount, but to increase the milk yield two pounds per cow daily, means a large increase in the profit from any herd.

If you have thirty cows, two pounds more per cow daily would be sixty pounds, worth about $2.00. During the winter season this would total $350 or more.

Truly, this is an extra profit well worth seeking, especially since there is no expense connected with it, aside from the small initial investment in drinking cups.

Water costs practically nothing and to be able to turn water into milk with no effort further than to keep the water supply tank filled, is about as easy a way of making money as one could ask.

Hoard's Dairyman Finds Drinking Cups Profitable

"In the stables of the Hoard's Dairyman herd are installed 42 drinking cups, one for each cow. The installation of these cups providing the cow with plenty of water whenever she wants it night or day has resulted in a perceptible increase of milk. It reminds us of the remark made some years ago by a Wisconsin dairy farmer to the effect that although well water was about as free as air, it was the last thing properly provided for the cow. A visit to the stable say at 9 o'clock at night will discover quite often a number of the cows taking a comfortable drink from their water cups. We are convinced that this is a highly profitable investment to make. Pure water ready at any time and pure air are two things that greatly promote the production of milk."—Hoard's Dairyman Editorial, Feb. 1, 1918.

"According to our milk records", says W. H. Martin, who is herdsman at Arcady Farm, Lake Forest, Illinois, "James drinking cups increased our milk yield 4 lbs. per cow, per day. With our herd of 97 cows, the cups save two hours daily."

Herman Olson, Cambridge, Wisconsin, "Considers James Cups in relation to outside tank as the modern silo is to the old way of feeding dry cornstalks outside on the snow bank."

Walter Bringold, Wanamingo, Minnesota, is another who puts James cups in the same class as the silo for milk making. "If I could have but one, judging from my experience," he says, "I would rather have the drinking cups than the silo, as I believe the drinking cups make more milk."

What James Cups Accomplished in 28 Herds

Twenty-eight dairymen who kept milk records reported the following results from the use of James Drinking Cups:

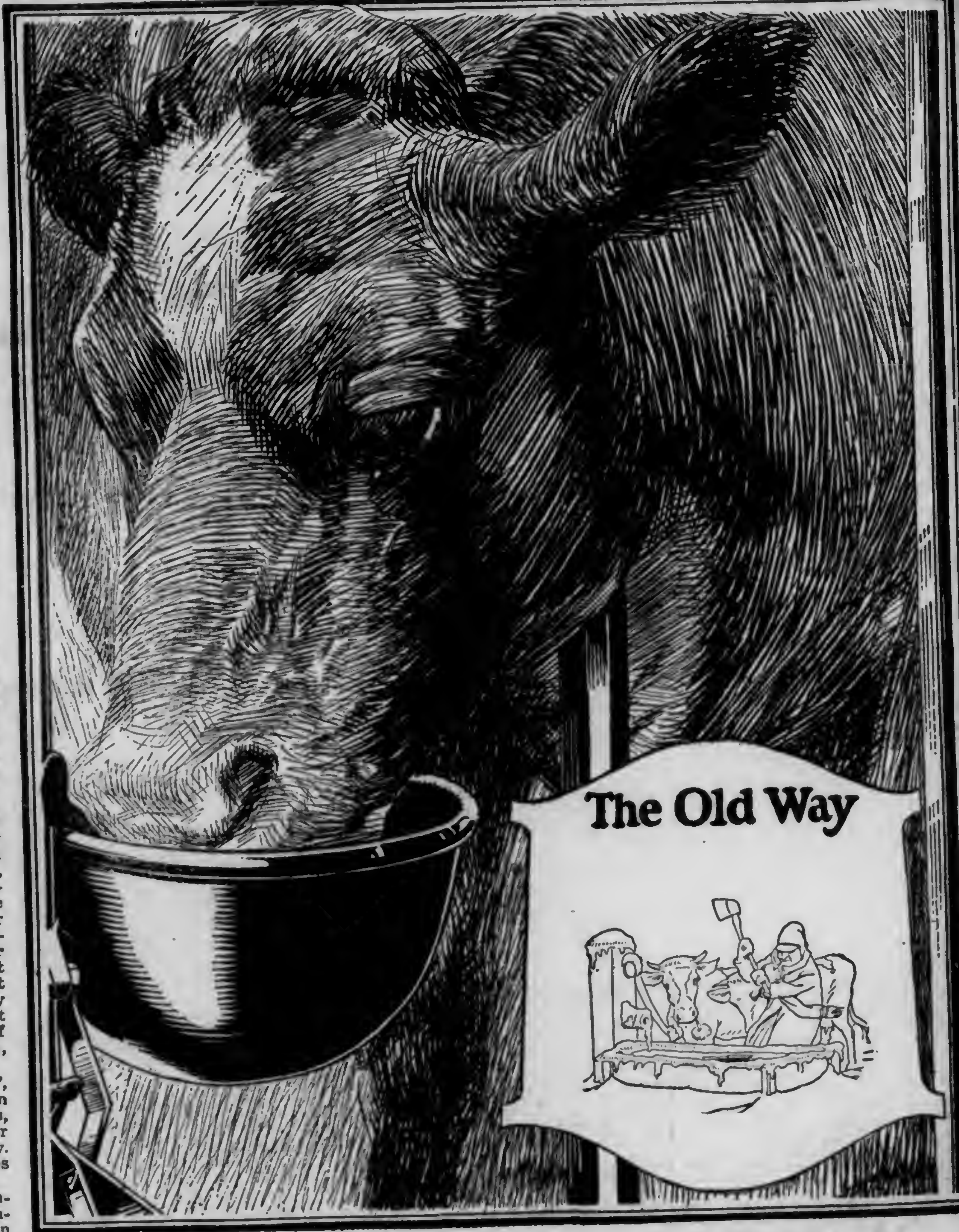
One had an increase of from 5 to 10 lbs. per cow per day; three an increase averaging 4 lbs.; three had 3 lbs. average increase; six, 2 lbs.; three, 1½ lbs.; one, ¾ lb.; one reported $8.56 average increase per cow per year; one an average increase of $5; one, $10; one a 3% increase; one 8% increase; two, 10% increase; one, 12½%; one, 20%; and one, 33⅓%.

These reports covered a total of 759 cows, averaging an increase of 2.45 lbs. milk per cow per day.

The Saving in Labor

In a recent investigation of 120 herds in which James cups were used, the owners were *unanimous* in stating that the cups saved them time and labor.

Their answers ranged from ½ minute per cow, per day, to 10 minutes per cow, average being 10 hours saved per cow, each year.



The James Way

The Calves Grew Faster

Out of 87 dairymen using James cups in their calf pens, 80 say that they have "observed that calves grow better and faster by having a constant supply of water before them."

Help Prevent Spread of Disease

These dairymen were almost unanimous in considering that drinking cups help prevent the spread of disease, each cow drinking from her own cup.

Above are a few of the facts brought to light in this investigation of James drinking cups. The complete results are set forth in Bulletin No. 4, which will be sent on request.

Other Work Savers and Milk Makers

Such as the James litter, feed, and milk can cariers and trucks, cow stalls, stanchions, mangers, cow pens, bull and hog pens, ventilators, swill carriers, horse stable fixtures, hog, sheep, and beef barn equipment, are described in the book, "The Jamesway" which will be sent on request.

Barn Planning

For many years, the James Barn Planning Department has been helping customers and others in planning new barns and remodeling old barns. In this work, Mr. James has associated with him a competent architect and engineer of unusual experience in ventilation and construction problems, another architect who has many years of experience in the planning of new buildings and remodeling of dairy barns, a large number of experienced draftsmen—and in the field are some 60 experts whose work takes them daily into dairy barns in every part of the country, consulting on remodeling and other barn problems, drawing preliminary plans and reporting on new ideas and unusual conditions.

All this experience and ability in the planning of new or remodeling of old dairy barns, is at your service.

Full information regarding the James barn planning service and all James equipment is given in the

Free Barn Book

of 336 pages entitled "The James Way" which will be sent on request. Please state number of cows you own.

If interested in hog barn equipment ask for the "Hog Barn Book".

You want more milk from your cows—you want less work—write for it today.

James Manufacturing Company

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Makers of Labor-Saving Barn Equipment

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Established 1880
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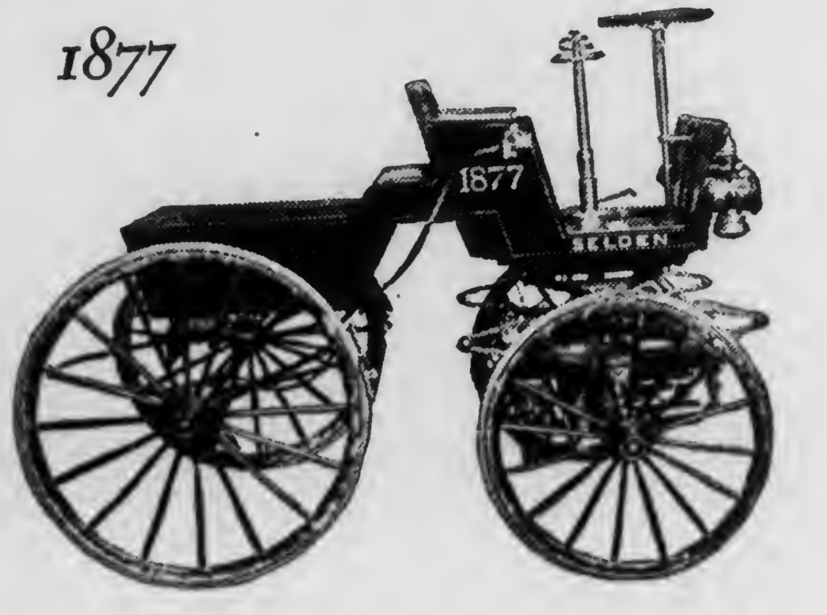

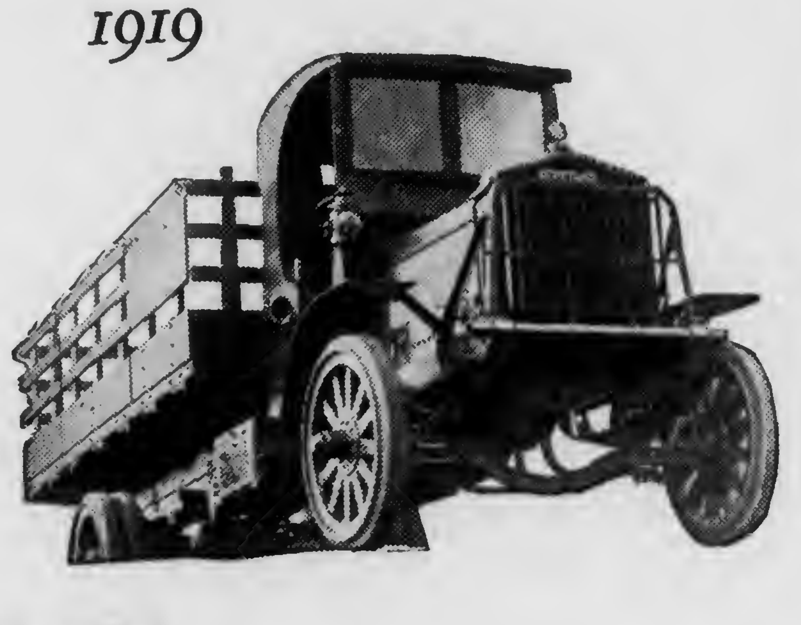

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1919

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Road Wagon in All the World
Was a SELDEN in 1877

When you choose a motor truck to do the hauling on your farm, consider the stability of the manufacturer of the vehicle. For the guarantee of a reliable manufacturer will be of considerable value to you in the years after your purchase that the truck is in operation.

Consider the value to you of the guarantee behind every SELDEN TRUCK that leaves the factory—the guarantee of a manufacturing organization strong financially—the guarantee of the oldest and one of the largest manufacturers of motor trucks in the world to-day. The first gasoline motor propelled road wagon in all the world was a SELDEN in 1877; and the present types of SELDEN TRUCKS are the product of years of continuous experimentation, observation and experience in manufacture since the day of their inception.

SELDEN TRUCKS are trucks of rugged construction, great hauling power, and almost unlimited powers of endurance. They are built on sound engineering principles which give them the power to render economical and therefore profitable service for many years after their installation.

Among the long list of users of SELDEN TRUCKS are some of the oldest and largest business institutions in this and foreign countries. SEARS, ROEBUCK & CO., the STANDARD OIL COMPANY, the GILLETTE SAFETY RAZOR CO., and the GOODYEAR TIRE & RUBBER CO., for instance, operate SELDEN TRUCKS. This fact alone is strong evidence of Selden superiority.

Selden Trucks are built in models of 1½, 2, 3½ and 5 Ton capacity, all WORM DRIVE, and are equipped with bodies that meet the particular requirements of hauling on the farm.

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ESTABLISHED 1880 PUBLISHED WEEKLY

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Philadelphia

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FINDING THE BOARDER HEN

Poultry Selection Work in Jefferson County, Pa., That is Raising Egg Yields

By J. E. McCORD, County Agent

Poultry in Jefferson County, Pa., as in many other sections of the state, is considered as a side line on the general farm. In most cases very little attention is given to the poultry flock, except by the housewife. There are no large commercial flocks in the county. The average flocks found on the farms consist of from 30 to 50 hens. To many persons the poultry industry does not appear important. Its relation to the prosperity of our farmers is readily recognized, however, when we realize that the value of the poultry products each year is equal to 71 percent of the value of all the dairy cows, heifers, calves, bulls and steers in the county. There are over 100,000 laying hens in this county and, according to the last census, the average egg production was 68 eggs for each hen during the year. This is a total of 6,800,000 eggs for the year. Placing an average of four cents on each egg, it would give an income to the farmers of $272,000 from eggs alone, to say nothing of the value of the other products.

The importance of the poultry on our farms collectively is large. A study of local conditions, however, has shown that the income derived from this source could be increased by from $150,000 to $250,000 with very little effort on the part of the farmers.

An increase in income could be brought about by the wise selection of the egg-laying type and the elimination of the boarder hen, which could be gradually replaced by the good egg-laying strain. In the past we have heard much concerning the boarder cow, and our wide awake farmers have taken steps to eliminate her. But of the boarder hen we have heard very little until recently.

While the average production for each hen is 68 eggs, and we know that many hens lay over a 100 eggs each, it is evident that some hens must lay less than 50 eggs a year. Figures furnished by poultrymen in the county show that on an average it costs $2 to feed a hen a year. Valuing eggs at four cents, any hen that lays less than 50 eggs each year must be a boarder. The loss caused by the boarder hen will run, in this county, to thousands of dollars a year. This loss seems the more absurd when we know that it can to a large extent be prevented.

The Farm Bureau early saw the importance of the poultry industry in the county, and realized the possibilities of making it return more money to the farmers with very little work, and no additional outlay in capital. Our Farm Bureau believed that the returns from poultry could be increased by acquainting the farmers with the true facts concerning poultry selection. Consequently an educational campaign with this object in view was planned.

Poultry Selection

A worker from the Extension Department of The Pennsylvania State College, H. C. Knandel, who has made a special study of poultry problems, spent some time in the county in becoming acquainted with local conditions. It was decided then to hold a number of demonstrations on the selection of poultry from a utility viewpoint, and to follow this work up with sufficient publicity to acquaint the poultry raisers with the facts secured.

One of he first things that was done in response to inquiries from some of the citizens interested in poultry was to assist in forming a poultry association, at Brookville. This organization has done splendid work along educational lines. It has conducted an egg-laying contest, and this year put on a poultry show at the County Fair at which some of the best birds in the county were shown.

What Hens to Keep

There are known to be certain essential points in the selection of poultry to increase egg production. These points have been established by workers at our experiment stations and verified by many of our leading poultrymen in the country. At our demonstrations it was these points that were specially emphasized. They are as follows: In culling a flock it is essential to keep:

1. Only hens with good constitutional vigor.
2. The late moulters—as they are too busy laying high priced eggs to moult.
3. The birds which have the brightest eyes with clear cut head.
4. The hens with strong, sturdy legs, set well apart.
5. The hens whose shanks and beaks are pale in the late fall and early winter.
6. The hen with a strong broad back.
7. The hens that have a deep full abdomen. The capacity is measured as follows: The greater the number of fingers one can place between the pelvic or lay-bones and the breast or keel bone, the greater the capacity. A bird is considered to have poor capacity for laying eggs if only one or two fingers can be placed between the lay-bone and the keel bone.
8. The hens with well-rounded chests.
9. The tight feathered hens.

What Hens to Reject

The purpose of selection is to increase production and to prevent the birth of individuals not suited for production. To eliminate the boarder hen we should eliminate those hens which are:

1. Diseased or poorly developed.
2. Hens which molt early. Tests have shown that the hen that moults early is invariably a poor layer. When a hen molts in July, August or September, she may lay a few eggs in the early part of the winter, but she will then stop and will not start to lay right until the following spring. A hen that does not moult until late is the best layer. She will lay in the fall when eggs are high in price, and when she moults in November or December she will moult quickly and be ready to lay in the spring as soon as the hen that moulted early and loafed the rest of the year.
3. The hen with a yellow beak and yellow shank in the late fall and in the early winter is a boarder. The yellow in the beak and shanks is fat, and the hen that has been laying right along has been using up this fat to produce eggs. All hens in the spring, except breeds which are characterized by pale shanks, have yellow shanks. As the season progresses, the laying hens use up this fat. In the late fall a hen with yellow shanks plainly shows that she is a boarder.
4. The hens with narrow backs and shallow abdomens. These hens do not have the capacity to lay many eggs and never will, so they should be eliminated as they use up valuable food.
5. Hens with loose feathers and flat chests show that they are poor producers and should be eliminated.

There are other ways of determining the egg production of individual hens which may be more definite, such as keeping a trap nest record, on testing each individual hen in the morning before laying. This testing work is done by catching the hens each morning and carefully feeling to see if an egg is already formed, which she will lay that day. These two methods are very accurate, but must be run over an entire year to determine definitely what the egg production record is. With the selection from external characteristics only, not so much work is required and one can cull very rapidly.

To acquaint the farmers with the essential points of poultry selection for increased egg production, a total of eighteen demonstrations were held in various parts of the county, which were attended by over five hundred farmers. After the demonstrations, practically every one present stated that they would cull their flocks.

At these demonstrations Mr. Knandel usually gave a talk on the importance of selection for egg production and explained how the selection should be made. He went into the farmer's flock and picked out one good and one poor producer. He showed these to the farmers, and explained

(Continued on page 14.)

Installing a Farm Water System—III

How to Build a Plant For Taking Care of The Sewage

By WILLIAM C. TUCKER

SANITARY ENGINEER

The disposal of sewage from the isolated country house must be accomplished in a most scientific and hygenic method. A careful study of existing conditions is essential; various data must be gathered and thoroly investigated. There can be no haphazard decision, and all questions must be carefully determined.

The theory of the disposal of sewage in a scientific manner is most elementary in principle and is based upon the natural laws. It is simple in application and rudimentary in execution, and is surrounded with various simple scientific principles which must not be overlooked, to achieve satisfaction and permanent results.

The system of sewage disposal for simplicity in designing and study, is generally separated into three sections; the sewer line from the house, the settling basins, and the disposal field, each with their coordinating adjuncts.

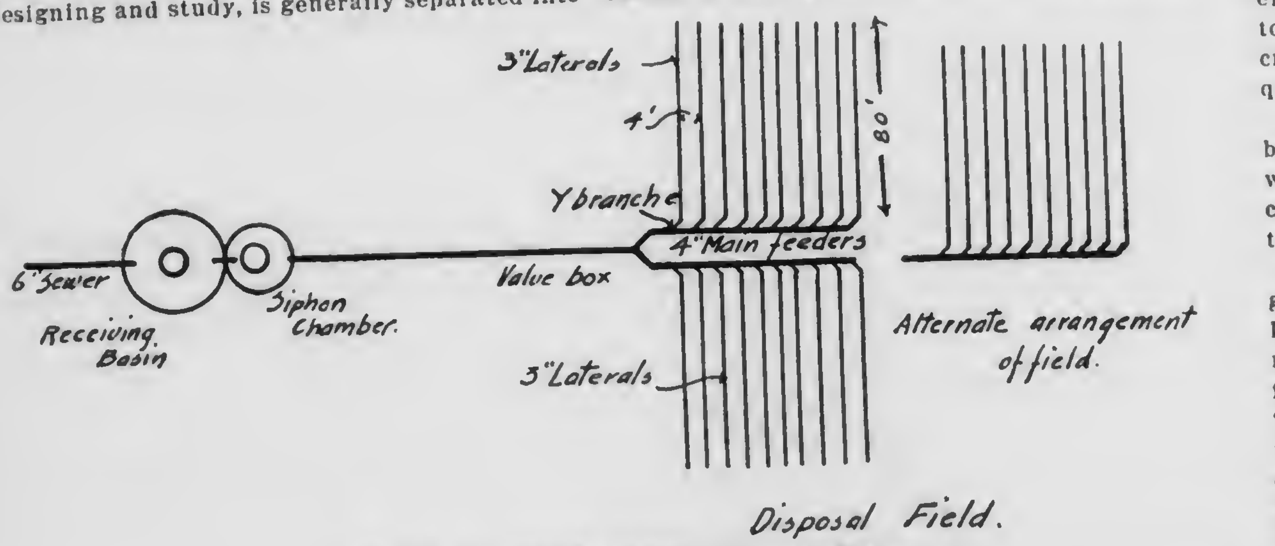

Figure 1.—Typical Sewage Disposal System

A typical sewage disposal system is shown in Figure 1, which is simple in design, and compact in construction, and contains the essentials for all work of this nature.

The line of the proposed sewer from house to the settling basin cannot be determined hastily or without careful investigation and exploration; altho simple in themselves, many serious errors have been committed. It must be truly straight between fixed points, as direct as possible, and must not be curved; making its relocation for additions or removal of stoppage in the sewer most difficult if not impossible to find without exploration after scar of trench has been erased by growth of vegetation. It must avoid the outcropping of rocks and trees; the removal of the former adding greatly to the cost of the work. The trench for the sewer line must avoid all sources of the water supply, water courses and streams, as far as possible, as the excavation will act as drainage channel during operation and even after refilling for some distance either side, and will effect the water levels of nearby wells and springs. The excavation for the sewer may be started at various points along the line simultaneously, always beginning at the lowest point and working up grade, so that there may be always free drainage after each storm, or should water be encountered in trench. The bottom of trench must be cut true and straight, without bends or hummocks, so that pipe laying may proceed rapidly without interruption. They must be of such width that there be one foot clearance either side of hub, so that work may be truly laid, and joints most thoroly made.

The sewer should be laid about three feet deep, depending upon locality and exposure, for protection against freezing where circumstances enforce a grade causing sluggish flow. The pipe may be either cast-iron or earthenware. The cost of the former prohibits its general use for outdoor farm work, altho it can be laid quicker, being manufactured in five foot lengths as against two for the latter, but the joints themselves cost more. Earthenware or tile pipe must be hub and spigot, sound, salt glazed, vitrified, truly straight and cylindrical, and without blisters, check, or other blemish, and must be thoroly tested and inspected on bank before lowered into trench on account of possibility of damage during transportation and pressure to be sustained after trench has been backfilled.

The sewer must be laid absolutely true to line and grade, with hubs uphill. The joints of pipe must be made with great care to prevent leakage of sewage and seepage of ground water into flow, and must be made in the following manner; spigot is inserted into hub of pipe last laid, care being taken not to disturb. A rope of oakum is then caulked into joint, pipe is centered, inner surface of bottom of each is made continuous and true, joint is then well packed with Portland cement, and interior of pipe carefully swabbed to remove any cement, which may protrude and cause stoppage. Joints of pipe in proximity to growing trees, must be tar coated to prevent root tendrils entering and causing trouble.

After a number of lengths of pipe have been laid and the joints have had sufficient time to thoroly set, the trench should then be carefully refilled in one foot layers, caution being taken not to disturb pipe already laid, but to tamp the filling about sides with great care. The first two feet of filling should contain no stones over 2 inches. No pipe should be left exposed over night for fear of damage from material from sides of trench.

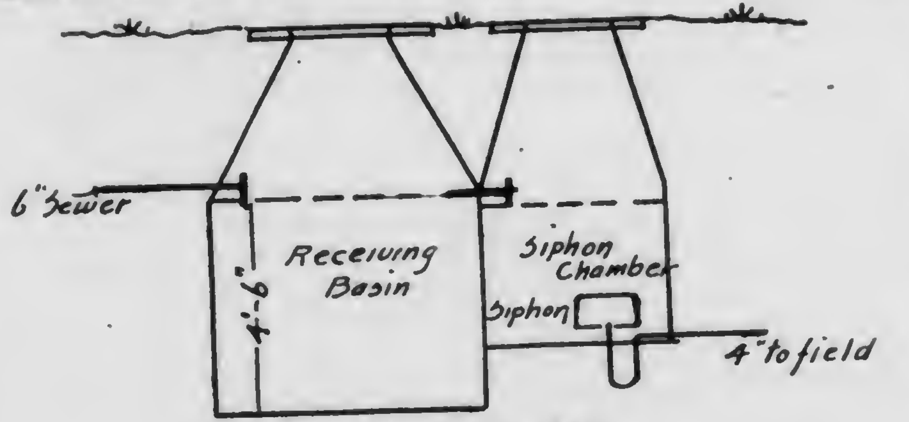

Figure 2.—Settling Basin

The size of sewer will depend of course upon water consumption in house, its grade, and length. Six-inch pipe will be found to answer general purposes, but under no circumstances should four inch be used; there is a slight factor of safety in favor of the former but absolutely none in the latter. The grade or fall of a six-inch sewer should not be less than 1% (1 foot to a 100) so that all solid matter may be easily moved by the current.

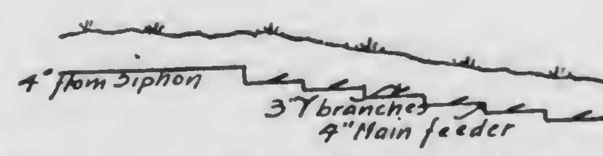

Figure 3.—Main Feeders, Designed to Accommodate Sloping Ground.

The sewage from the house is delivered thru the sewer or drain to the settling basins or septic tank, where it is allowed a period of rest and is then delivered to the irrigation field for final disposal by the sewage siphon. The advanced method of scienific sewage disposal is hygenic and absolutely safe, and embraces the most recent developments in sanitary science. The operation is simple and requires but little attention.

The setting basins, are shown in Figure 2, and consist of a receiving chamber and basin containing the automatic siphon built together. These basins are built of masonry or cement, are watertight, and are provided with manholes for inspection and cleaning. The receiving basin should be of such size as to hold a day's discharge of sewage, with depth of water not over four feet six inches. During the period of rest of the sewage, fermentation develops, the heavy matter is broken up, the mineral and insoluable portions failing to the bottom in the form of a sludge, which increases very slowly; the remaining effluent is quite free from suspended matter.

The effluent overflows from the receiving basin into a smaller chamber, containing a siphon, which automatically, when sewage has reached a certain height, discharges contents at one operatino into the disposal field.

The disposal field must be laid in sandy or gravel soil with good drainage and sufficient fall. It is most simple in construction, and consists of a main feeder from the siphon basin leading to the field and which at certain points is provided with "Y" branches from which radiate the length of irrigation tile, and in theory of operation may be compared to that of the human lungs, the chemical and physiological action being very similar. The field is divided into two sections, as shown in Figue 1, for alternate flooding, so that each may enjoy a period of rest for recuperation, of two weeks. The sections may be built opposite to or in front of each other, as shown in Figure I, according to available ground.

The disposal fields are controlled by means of simple sliding valves in box as shown in Figure I, the operation of which directs the entire discharge from siphon chamber into either field.

The main feeder lines shown in Figures 1 and 3 are of 4 inch pipe, with 3 inch right and left Y branches, which can be obtained in such shape as to accommodate the slope of the ground, and retain a horizontal position so that discharge from siphon may be forced to entirely fill the 3 inch laterals, and not rush to end and burst thru surface.

The 3 inch lateral lines shown in Figure 1 are of drainage tile, and extend from the "Y" branches of main feeder, and are about 80 feet long. These lines are laid very flat, with fall of 4 inches in their entire length, the length and fall being determined from observation, and are such that each lateral of field is filled after each siphon discharge, wihch is absorbed by surrounding material thru open joints. The laterals are spaced 4 feet apart in carefully prepared trenches 10 inches deep, as shown in Figure 4. The gutters are laid first, upon which are placed the tile, with ½ inch space between joints which are covered by caps to prevent soil from entering and clogging. The lines are then carefully surrounded with 4 inches of 1-inch broken stone, gravel or course boiler cinder, which is protected against soil by a 1-inch layer of salt hay.

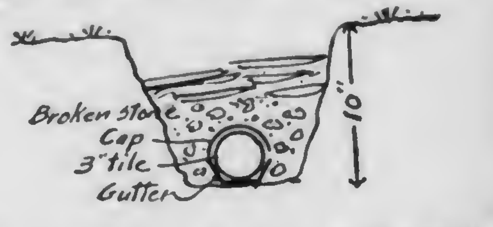

Figure 4.—Three-Inch Lateral in Trench With Stone Covering, Showing Cap and Filling.

The theory of sewage disposal by this method is based upon chemical and physiological laws and in operation may be compared with the action of the human lungs. The effluent discharge from the open joints of the laterals is attacked by the oxygen retained in the interstices of the surrounding stone, the nitrogen given off is greedily assimilated by the root tendrils of the covering vegetation, and the free liquid is dissapated by the surrounding earth.

The proportions of the disposal field will depend entirely upon the water consumption of the house, a safe allowance for which may be taken at 60 gallons per head per day, with running water. Each section of field should be designed to retain 80 percent of siphon discharge, the 20 percent being the free discharge from open joints.

No farm drainage or water from wash tables should enter the system on account of the difficulty of preventing the finely masticated food of the animals entering the small laterals and causing trouble, and the added size which the wash water will demand of the system. The field cannot be used for agricultural purposes and there must be no haulage or plowing for fear of injury to small pipe.

Under no consideration should the privy or leaching cess-pool be considered for any proposed new work, they are a constant menace to health, both from flies and contamination of the water supply. Those in use should be abandoned, the excavation cleaned and thoroly lined and filled with clean material.

Where expense is a matter of serious consideration, and as a temporary expedient only, a simpler form of disposal may be employed, consisting of a receiving basin in connection with an over-flow well in which case the former should be ot greater capacity, allowing a longer period of rest for the sewage, and more complete settlement and fermentation, so that the liquid may be of a higher standard of purity. The overflow well must be large, and built in sandy or gravel soil, with open bottom, and sides and with lower courses of wall laid dry with free openings, and placed well away from the water supply.

Scientific sewage disposal was in its infancy not many years ago, since which time it has developed into an exact science; the various methods of purification have been carefully studied, with the result that the installation has been greatly diminished in size, cost has been reduced, period of sedimentation and fermentation has been decreased, and a more simple and compact installation has been produced.

Profiteering Farmers

I wish that the editors of the city dailies who think that the farmers are rolling in wealth, could have been with me last week in a trip of hundreds of miles in North Carolina. From a long experience in the cotton country I can say that there has never been such a failure of the cotton crop in thirty years.

In hundreds of miles travel I did not see a field of cotton which looked as tho the owner would get costs of growing it even if the price goes to 40 cents a pound, and in the low country near the coast, many farmers with land capable of making 75 bushels of corn an acre, the deep peaty soil of the reclaimed swamps, will not have corn enough to furnish meal for their families.

It looked like a glimpse of Paradise to get back to the Eastern Shore Peninsula. The Two Virginia counties are getting off their great crop of sweet potatoes and the late corn planted after the Early Irish potatoes were dug is making a heavy crop. There is a larger area in second crop and late planted Irish potatoes than usual. The second crop is from seed grown this summer and the late planted is from cold storage seed of last fall.

The potato growers on this Peninsula are very rapidly coming to the conclusion that they had all better quit using the Maine seed potatoes and use their own late fall crop. It is well known that the home potatoes will largely out-yield the Maine seed, but they come in a week later, and as every grower wants to get this crop in the market as early as any one else they stick largely to the northern seed tho it brings them more disease. The Jersey growers are getting familiar with the yielding habit of the second crop Southern seed and one grower in Monmouth County wrote me that they made twice the crop there that the Maine seed did. The reason is not hard to find. The Main potatoes are dug far earlier, are riper and will sprout in the cellar in winter. These sprouts are rubbed off and the terminal bud is destroyed, and in spring they start from a bunch of lateral buds and from potatoes weakened by the sprouting. On the other hand the late crop here and Southward grows green till frost kills the tops. Dug in November and December and planted in February these potatoes do not get mature enough to sprout in the cellar. They start much more slowly when planted, but they grow from the strong terminal bud and from pieces where the plant food has not been lessened. Any potato grower knows the difference between a potato plant with one strong stem and one with a cluster of stems. I once planted some of these second crop seed of my own growth in North Carolina alongside of some New York potatoes grown at Cornell Experiment Station and some from the Maine Experimental station. I took photographs of the growth in the different rows side by side. It was very apparent that the growth of the home seed was superior to that of the Northern seed. I dug fifteen hills of each, placed them in a pile side by side and photographed them. There was not a potato in the rows grown for the Northern seed which would not have been a culling in the crop from my own seed. Now if all of our growers would agree to discontinue the use of the seed potatoes from the North all would fare alike in earliness and all would sell far more barrels of potatoes.

Passing down the railroad a man from the North wanted to know why the fields of late corn were so much better than the early corn. He was surprised to learn that the late heavy corn was grown as the second crop on the land after selling a profitable crop of early potatoes in June. The early Irish potatoes get about 1500 pounds an acre of a high grade fertilizer and there is plenty left for the corn crop. Considering the future of the soil my own opinion is that in a long run it would be far more profitable to sow peas (cows peas) after the potatoes, turn them under and lime the land and sow crimson clover as a winter cover to turn under for corn in the spring, making thus a good early crop of corn so that the late crop would not be needed and the land would be greatly improved in fertility and less money required for fertilizers. Present profit is often final loss in farming.—W. F. Massey.

Setting Up a Storm and Rat Proof Metal Corn Crib

Drainage Amendment in New York

At the November election the citizens of New York state will have an opportunity to vote on an amendment to the constitution which reads in part as follows:

"The use of property for the drainage of swamp or agricultural lands is declared to be a public use and general laws may be passed permitting the owners or occupants of swamp or agricultural lands to construct and maintain for the drainage thereof, necessary drains, ditches and dykes upon the lands of others, under proper restrictions on making just compensation together with the cost of such drainage may be assessed, wholly or partly, against any property benefited thereby; but no special laws shall be enacted for such purposes."

This amendment asserts definitely that land may be condemned for the construction of a drainage ditch. In the past it has been necessary to bring action under the health laws in getting a ditch constructed across land of objecting property owners. This amendment specifies that the drainage of land for agricultural purposes is a public benefit.

Under the old system court costs were prohibitory to small drainage projecs. In Niagara County, it is said, there is a ditch three-quarters of a mile long, crossing four properties, of which the actual cost of digging was $350, while the commissioners' fees, court costs and other expenses involved by court proceedings made the total cost $1140. Another ditch constructed in the same county, in 1910, is about 3½ miles long. The actual cost of digging was $3,500. The cost of court procedures totaled $14,000. Some property owners fought the assessments until 1918, when interest on bonds and additional court costs had increased the assessment to $20,000.

It is believed that this amendment if successful, will keep out of court many of the smaller drainage projects, and that it will mean the development of large areas of swamp lands, in addition to simplifying procedure in securing drainage for millions of acres of cultivated land in the state which need underdrainage. Such a law has long been advocated in the agricultural papers, but this is the first time that the voters of the state have been given an opportunity to act upon it.—E. E. R.

Use Oat Straw in Winter

Oat straw ought never to be used for bedding during hot weather because it is too heating; for the same reason it should be used during very cold weather. Another reason of almost equal importance is that the work horses need all the good feed that can be supplied to them in order that they maintain a good condition thruout the summer when they are often taxed to the utmost of their capacity and when there is often barely time enough for full meals. On the other hand, during the winter months when the weather is too cold to work with the teams and when, as a result of this inactivity the horses become fat and almost unmanagable, this is the time to feed the comparatively poorer oat straw. The horses can eat the pick of their bedding or it can be placed in the rack like hay. Fodder can be used with it alternately with an occasional fork full of hay for the sake of variety. When good hay is worth between 30 and 40 dollars, as it is just now, more oat straw ought to be fed.

Some may wonder why oat straw is more heating than wheat straw when used for bedding. This is very easily explained. If we examine both a stalk of oats and wheat, we find that the wheat stem is coarser, stronger and larger and that the physical construction of the oat stem superinduced as it is by the nature of its growth—it is a spring plant whereas wheat is a winter crop—is frailer and softer and consequently it settles itself easily and quickly and thus prevents the circulation of air thru it. This makes it good for the preservation of ice also.—R. I. W.

An Iowa farmer is responsible for the statement that if a newly purchased rope is so kinky that it cannot be used, the twist may be removed by tying the rope to a wagon and dragging it about on the ground.

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Our job is to serve our readers. Whenever and wherever we can help you, write us.—The Editors.

Reduce Public Expenses

THE reading of our Harrisburg letter on the opposite page brings to mind the serious situation which faces public treasuries all the way from townships to the national government. In addition to the payment of debts incurred by the war every branch of public government has planned improvements, extensions and additions which must be paid by taxation. The public highways will require the expending of millions of dollars. The increase of salaries, the improvement of public schools, the building of bridges and public buildings, the maintenance of charitable institutions, etc., all call for more money. Added to this is the continual call for sums to be donated to semi-public institutions by private subscription. The big question is, how is the money to be raised? What shall be limited and where can expense be eliminated? Every activity that was called into being by the war desires to be continued and is appealing for political and financial support so that the numerous jobs may be made secure.

It is time to cut out a lot of the non-essential office holding. The mails are flooded with waste-basket filling that is nothing else than propaganda to perpetuate unnecessary work. Let those who are so concerned for the "dear public" resign from their snaps and go to some productive work, and let every bureau, commission and department created for an emergency be dismissed at once. Millions of dollars could be saved and much valuable material be conserved. Let all necessary work on public necessities be pushed economically, but eliminate every sinecure in the land.

Where Does The Farmer Stand?

THE farmer finds himself in a rather peculiar situation in the present jumbled world condition. All other interests are inviting him to ally himself with them in the fight against opposing interests. This he manifestly cannot do, nor can he become the unqualified ally of any one of them because he has a sympathetic relationship in some respects with all of them.

1. He has capital invested in his business, hence he is interested in receiving fair returns upon actual investment.

2. The greater part of his income is for labor expended, so he is interested in the just and lawful rights of labor including the right of collective bargaining.

3. His class is the largest consuming class in the country, hence he is vitally interested in safe-guarding the consumer from profiteering and unnecessary costs of distribution.

4. He is an employer of labor and is therefore, interested with the manufacturer and others in receiving an honest day's work for an honest day's pay.

Taking all these things into consideration in connection with the fact that he comprises one-third of the population, who should be better fitted to act as arbitrator and advisor in the present crisis? Who more likely to pronounce judgment fair to all than he? Yet, for some reason he does not seem to figure to any great extent in the formal councils of the nation, or in the conferences called to consider vital questions. The logical reason seems to be that he has failed to organize efficiently, while all other groups have been perfecting strong organizations and learning to work together. For this reason these groups can speak and act in unison and exert their collective strength, while the farmer too often speaks as an individual, or for a small number.

It is apparent to even the casual observer that those who assume to speak as farmers for the farmer differ widely in their sentiments and conclusions, and that up-to-date there has been nothing formulated that would pass as the farmer's answer to the perplexing problems which threaten just now to disrupt society and bring industry to a standstill. Let us examine some of the most engaging and disputed points:.

There are many things which indicate that the present agitation is quite as much political as economic. In other words, the form of government and its relation to industry is being discussed by the laboring class quite as much as wages, hours and living conditions, and is referred to as

NATIONALIZATION OF INDUSTRY.—The agitation for this move began seriously in England two years ago when a committee composed of all classes of employees reported favoring the reorganization of business upon a democratic basis; that is, the elimination of the system of individual ownership and control, and the acquisition of the industries by the public, to be operated co-operatively by the public for the benefit of the public. Eventually, this plan is intended to apply to the land as well as to mines, factories, transportation systems, and other big enterprises. So strong was the sentiment back of this plan, especially during the war, that many English statesmen and other leading citizens favored the plan. In this country, many labor leaders and others have been agitating the plan of

GOVERNMENT OWNERSHIP.—This idea is quite similar to that of the English Labor Party program, altho not so broad in intention, nor so democratic in principle. There is reason to believe that the real motive back of some of the big strikes in this country is the idea of forcing political action that will result in government ownership of the essential industries. Altho the experience we had with the railroads during the war is not a fair test of government ownership, it was sufficient to cool the enthusiasm of many champions of the idea and we do not believe that the people, outside of a few theorists, are favorable to any scheme of government ownership. This, we believe, is especially true of farmers, in spite of the declaration of a few radical, would-be leaders to the contrary. The more sensible and democratic plan under our conditions is, undoubtedly, private ownership and operation with full and efficient government regulation. The impossibility of harmonious, cooperative operation of industry was indicated by the contentions spirit and final disagreement of the late Industrial Conference. One of the fatal rocks there was the principle of

COLLECTIVE BARGAINING. On this question, labor and capital were both unreasonable. Farmers can join hands with labor on this point in the demand for recognition of the principle of collective bargaining. Organization for business of any kind is essential for efficiency. Business organizations have their officials who speak and act for the whole, and for business men to require laborers to deal with the business organization individually and separately is as unjust as it is impossible. For the same reasons, farmers must have the right of collective bargaining. The anti-trust laws must be so amended as to permit the cooperative action of farmers in the sale of their products.

One of the most disgraceful happenings of the past year of eratic doing was the arrest and trial of farmers in three states upon the criminal charge of restraining trade in acting for dairymen's organizations in establishing a fair price for milk. It is the denial of just rights by the blind reactionaries in business that has done much to precipitate the era of radical action and agitation. However, one thing that helped break up the industrial Conference on the question of collective bargaining was the narrow definition given it by leaders of labor organizations. Instead of standing for the broad principle of bargaining thru representatives, they insisted upon coupling it up with their principle of the

CLOSED SHOP. By this is meant the denial of the right of a manager of business to employ any except members of the union, or to discharge any wthout its consent. This principle is entirely inconsistent with the demand for freedom of action and the right of collective bargaining. It is undemocratic in principle, autocratic in practice and results in placing a premium upon laziness and inefficiency. Farmers cannot sympathize with this demand because it is morally wrong and economically unsound. They believe in the right to organize, but the strength of an organization must be used to promote justice and the common welfare, and never to limit production, or as a highwayman's club to intimidate others, nor to defend a crook. Many of the demands now being made by labor unions, and which are the cause of the innumerable strikes, are, we believe, not the sense or the sentiment of the honest, industrious members, but are fomented by professional agitators who wish to bring about a political revolution and establish a state of industrial socialism which, however beautiful in theory, cannot be achieved suddenly without bringing chaos. Mankind is neither wise enough nor good enough to perform its full duty without the spur of necessity. That many of these leaders lack both the wisdom and the goodness is shown by the unjust and economically unsound demands now being made as to

WAGES AND HOURS. There was a time when the members of the unions were justified in exerting their strength to lessen the unbearably long hours of toil and to secure a just wage. It is not so many years ago that a 12-hour day and a 7-day week was the rule in some industries. Society backed the rebellion against these conditions and cheerfully paid higher prices where necessary, for the sake of humanity. The public has always sympathized with the wronged, and backed every justifiable strike. But its patience is about exhausted. It is the old story of the camel getting its nose into the tent repeated. It is physically and economically impossible to apply the present industrial hour and wage scale to farming and come out whole. One of the contentions in the present coal strike is for a six-hour day and a five-day week. If they should be successful, it would mean similar demands by other unions and there is no end to the extreme this spirit would carry such inconsiderate greed. The great majority of the strikes now in progress cannot be said to be based upon demands for justice, but they would, if successful, inflict an injustice upon society as a whole.

THE FARMER'S DUTY. We have gone at length into this matter in an effort to present some of the chief questions over which people are wrangling, and which will likely play an important part in politics during the next few years. In fact, there are already movements on foot to present them as planks in party platforms, and for the formation of new parties. Bids are being made for the farmer's influence. Both capital and labor organizations are endeavoring to influence him to line up with them and against the other. The farmer cannot afford to take sides in a class war. He sees wherein both are wrong and it is his duty to use the balance of power which he possesses to set both right and to establish justice and harmony in a chaotic world. His interests are jeopardized by the selfish greed of both the others, while at the same time he has a common cause with each upon some points. The farmer should take more than a selfish interest in studying the problems in dispute, because he has an opportunity to render a great service to humanity by exerting his influence for the adoption of such principles as will bring justice to all and work injury to none. There is need for the membership of farmers' organizations to do its own thinking and act accordingly. It is possible for even would-be leaders of farmers to be misled. Every proposition should be studied carefully.

HARRISBURG LETTER

The Local Elections.—While the elections taking place this week are of purely local character the real interest of the state in regard to them lies in the effect they will have next year. Because of its big delegations to presidential conventions and the size of its congressional representation, the Keystone State is going to play a big part in national affairs in 1920 and this fact should be borne in mind in observing the trend of things on Capitol Hill and in many a county and city the coming six months. There will be new fiscal officers and supreme court justices elected by the state next year as well as complete congressional and legislation delegations. The Sproul administration will ask an endorsement of its first year with its quiet, but effective reorganization of the State government and the voters will have a chance to express their preference in regard to legislators with the necessity of a change in the appropriation policy in regard to schools and hospitals in mind. It is recognized at the Capitol that the time is almost at hand when a delimitation must be made upon the money voted to the charitable institutions that should be supported at home. The schools of Pennsylvania in the opinion of leading state officials, are at a turning point; the commonwealth now has a road building policy and many other things to carry out which will either necessitate new taxation or a reduction of the grants to institutions not wholly under state control. The continuance of the agricultural advancement program is connected with this problem as are many others.. Upon what happens this week will be planned very largely the legislative work of 1921.

The School Situation.—One of the significant things about the election this week is the number of districts where school bond issues are to be voted upon. The aggregate is in the millions and is the result of the hold up of construction due to the war. Dr. Thomas E. Finegan, the state superintendent of public instruction, has urged that building be pushed as prices are uncertain and there is imperative demand for accommodations. Another development in the school situation is the teachers' salary question wherein there are numerous controversies. With the system of state aid openly declared to be more favorable to the centers of population than to the country, some of the rural districts have started to enter vigorous complaints which will also have their effect upon the session of 1921. And there is also growing up a movement to provide for a uniform nine months' term of schooling for every district in the state with a possibility that before many years it will grow to ten, eleven and then twelve months. This is going to mean just one thing, a larger measure of state aid for schools and a change in the way schools are conducted. These and many other problems will be threshed out at the conference to be held here in the week of the seventeenth by business men and educators invited here by the state authorities.

The Governor's Firmness.—If there is one thing that is standing out about the Sproul administration it is stability. Once a position is taken it is adhered to. The governor has shown a firmness in his statements that is refreshing considering what has been noted in some recent years. The positions taken in regard to road building, the state insurance fund differential, the federal rate fixing and the strikes have all been pronounced and have been followed out. There have been differences of opinion and protests, but the state government is showing the effect of a policy and a disposition to stick to it.

The Market Problems.—The Department of Agriculture is going at a study of the marketing problems in Pennsylvania that is attracting attention. Instead of assembling views by mail and telephone, the men connected with the market service have been going to the fields and the stations and some first-hand information that had been lying around loose is now being studied and found to contain nuggets. Secretary of Agriculture Fred Rasmussen has been at the Hagerstown conference listening to what has been said and meeting people from this and neighboring states, while Guy C. Smith, chief of markets, and Messrs. Gilbert and Taylor, of his staff, have been out going thru the apple, potato and grain raising districts, seeing what the state has to offer, noting the methods and the shipping facilities. Mr. Smith says farmers are losing money and that there is lost motion. The agents of the State Bureau of Foods have been finding that neither the farmer nor the retailer is to blame in some instances and that the careless handling of certain food products at the point of contact with the consumer is making trouble.

For Crop and Market Reports.—It is the plan of the state authorities to establish a system of daily crop reports available for farmers and shippers next year. These will be patterned after the systems in New England and other states with some adaptations to Pennsylvania and by this means bring to attention of people not now in contact with each other certain information that will benefit the growers and the eaters as well. The details are being worked out.

Institutes by Month.—The plan adopted for farmers institutes this year and next calls for institutes to be arranged month by month instead of for a whole season. This will permit of changes being made without disrupting a whole list and also of an alteration if things do not work. The institutes have been cut down about forty percent in number and convenience of meeting is being considered. The first list will be announced soon.

State Road Program.—On November 1 the State Highway Department had asked for bids for almost 817 miles of state road and opened bids on about 800. The contracts let run over $25,000,000. The bids opened here last week were for 112 miles and the low figures ran about $5,375,000. Some of the contracts may not be let owing to the high prices. Labor and weather conditions have held back the work.

Armies of Hunters.—More men are out in the fields and woods hunting than ever known before and the issuance of hunters licenses for the year may go to 350,000. The rabbit season opened a few days ago and good sport has been reported altho it will be better when Jack Frost gets around. Fair squirrel and quail hunting is general in districts where this game is to be found.

Arrests for Violations.—That the state means business in regard to its potato wart quarantine is evident. Over thirty arrests for violations have been made in anthracite counties. The quarantines in Cambria, Centre and Clearfield will soon be established.

Automobiles on the Farm.—It is estimated by the State Highway Department that there are 82,000 automobiles and 7800 trucks owned on the farms of Pennsylvania and used on them as well. The leading counties in ownership of such vehicles are Lancaster, Chester, York, Allegheny, Berks, Bradford, Crawford, Washington, Bucks and Westmoreland.—Hamilton, Harrisburg, Nov. 3, 1919.

NEW YORK LETTER

Daylight Saving a State Issue.—Whether New York State will follow the example of the National Congress and repeal the daylight saving law or take pattern from the New York City Board of Aldermen and allow it to stand will be forced on the attention of the Legislature early in the 1920 session. The state has a statute on its books conforming to the federal one, and unless it is repealed we stand committed to setting the clocks ahead for seven months of the year, beginning the first Sunday in April. The statue applies to "events, public offices, and legal and judicial proceedings," the public having acquiesced in the movement. It is safe to say that the law will be promptly repealed.

Market Notes.—Potatoes are creeping up somewhat, farmers delivering at the cars for $1.10 bushel this week. The car shortage is considered by some a blessing to growers, whose usual method of dumping their crop on the market at this time has been somewhat checked. At the Syracuse North Side market yesterday, with 150 rigs registered potatoes sold for $1.75 a bushel, several loads being taken home before the owners would accept less. Apples brought $2.25 per bushel to $3.50. Popcorn sold on the ear at $2 per bushel, and eggs reached the 90 cents mark. Meat offerings were light, 25 cents for veal, beef at 15 cents, hogs 18 to 20 cents. Mixed timothy and alsike hay brought $30 ton and other grades went for $20 to $27 a ton.

Crop Movements.—Of the total of 113 cars of celery moved in the country last week 36 were New York state stock. The celery crop is now 700 cars short of the usual forwardings, with four other states participating in the movements. The largest single acreage ever attempted in this state is on the Snyder farm near Sodus, where 70 acres of celery is being put into the East Williamson coolers. The price to date on most sales, including the Sndyer sales are $3 per crate, or better. The Snyder early crop netted 2,500 crates, and the late crop will range between 18,000 and 20,000 crates. Michigan is leading in celery, with Pennsylvania and Colorado together producing less than New York.

Forty-two cars of onions left state points last week. Onion shipments to date are about ⅝ of last year's movement. Massachusetts is leading the east in onions. Most of the inferior stock has now been moved and the remainder is bringing $2 per bushel. Fifty-two cars of lettuce left state points last week out of 72 cars as the country's total. New York's lettuce this year will exceed 25 percent of the other states total. Sixty-two cars of tomatoes moved last week, making a state total of 413 cars so far, or about 30 more cars from this state than last year. Tomatoes will be handled to November 15. Canning factories report an average yield of tomatoes of 7.1 tons per acre as against 6.6 tons last year. The acreage in this state was cut down 3,000 acres or more this year. Other Atlantic states tomatoes did not fare so well due to excessive rains. The canning pack for the country is but 50 percent of last year's. Cabbage shipments reached 215 cars last week.

Bees Starving.—Unless most of the bees of the state are fed liquid sugar they will perish of starvation this winter, so experts declare. Prof. Geo. Rea, state bee specialist, has co-operated with the New York Grange Exchange Inc. in putting 45,000 lbs. of sugar at the disposal of bee-keepers of nine counties of the state. Application for the sugar is made thru the beekeepers associations of the state, and duly passed upon officially. The sugar arrived in Syracuse this week.

More Protests of Attack on Farmers.—The federated women's clubs of Cortland County, with over 500 members voted a strong protest against Dr. Porter's dismissal as recommended by the Governor. The Cortlandville Grange has voted similarly. Dr. Porter will be the chief outside speaker this week at the conference of Farm and Home Bureau agents and other extension workers at the state college. Another resolution passed by the Grange was one forming a state board of censors for motion pictures.

November Milk.—The advance of 22 cents per cwt. for milk is welcome to dairymen, who were inconvenienced by the Oct. slump. The price is $3.33 for 3 percent milk with the usual differentials. In the Buffalo district a flat rate of $3.48 is offered, and in Syracuse and Rochester districts $3.65. The Syracuse $200,000 milk plant is now under way and will be ready by April 1. Special departments for handling the 50,000 quarts daily will be built, one for bottling and distributing to the city, one for pasteurizing, one for condensed milk and another to make up butter from the the surplus. The Cayuga County dairymen have had a big meeting approving the contract to let the Dairymen's League install modern machinery for making several kinds of milk products in this first plant to be so equipped by the League. Inspectors on the look-out for evidence of violations of the Sherman act have been holding up this work of co-operative dairy plant building all summer. But now that the busy farming season is letting up the plants will receive more attention. The Hartford plant has just received its articles of incorporation. The dairy boards made sales at 30 cents this week as compared to 32½ of a year ago. This is a rise of 1 cent over last week's sales. The basis of the November milk price took into account the average price of cheese as $.30151 and of butter as $.63947.—F.

NEW JERSEY NEWS

Fight For a Jersey Road.—The road committee of the South Middlesex Farmers' Association has been instructed by the organization to renew a fight for the continuation of the construction of the roadway between Cranbury and South River in Middlesex County. The committee is also trying to arrange a conference between the South River chamber of commerce and the Middlesex County Board of Freeholders following the holding of a public meeting in the matter. The proposition was brought up at the annual meeting of the association, which was held at the home of G. D. Brill at the Forsgate Farm near Jamesburg. Prof. John P. Hellyer, seed analyst at the State Experimental College at New Brunswick, was elected to the presidency.

Committee Plans For Corn Shows.—Four combined community corn shows will be held in Mercer County this Fall. Winners at these shows will exhibit at the corn show to be held at the time of the annual meeting of the Mercer County Board of Agriculture on December 12 and 13, and winners at that show will exhibit at the State Corn Show here in January. The first of these community shows will be held in the public school building at Pennington on November 7 and 8 in connection with the annual Hopewell Township Agricultural and Industrial Exhibit. Dates for the other community shows will be announced in the near future. The farmers in Mercer County have been requested to select a ten-ear exhibit and enter it in the community shows.

Annual Poultry Show.—For the first time since the outbreak of the war, the Morristown Poultry, Pigeon and Pet Stock Association will hold an annual exhibition during the week of January 5 next. Prof. Harry R. Lewis, supervisor of poultry husbandry at the State Experiment Station delivered an illustrated talk before 100 members of the organization in the Morris County courthouse at Morristown during the week. He said that there would be a display from the experiment station at the proposed show.

Farmers Shift About.—Shifting about of farmers and farm tenants in New Jersey has started on a more extensive scale than ever before, according to realty men and recorders of deeds who have the leases to handle, and they predict that a surprisingly big percentage of South Jersey farms, will have changed hands before next Spring. The general unsettled conditions thruout the country are said to be responsible for the much moving about in Jersey's rural districts. Scarcity of labor has prompted many of the older farmers, who have ample incomes and who feel that they are too far advanced in years to adjust themselves to the new methods of farming by machinery, to retire and move into towns, where houses are available. Many former tenants are now buying homes of their own, and there is also beginning to be a movement from the cities of the state to the farms and the consequent sales of much property. Real estate men who handle farm sites have claimed that there is an unprecedented demand for small farms, especially those not too far from railroads and with fairly modern houses. The scarcity of city dwellings and the high cost of living has been forcing numerous families to the farms.

Middlesex County Farm Agent Resigns.—Lee W. Crittenden, county farm agent for Middlesex County, has resigned to become county agent for Albany County, New York. His successor has not been named. A new farm agent is now located in Morris County in the person of Herton Ely, a Cornell graduate, who served for several months as assistant farm agent in Essex County and was raised on a general and dairy farm in New York State.

Even the most altruistic cow cannot do her neighbor's bit. Each must stand or fall by herself—and some should fall by the butcher's ax!

Watch for potato wart. It's a destructive disease of Irish potatoes which produces rough, spongy outgrowths on the tubers.

PRICES AND WAGES MAY NOT GO HIGHER

But the Purchasing Value of a Dollar is still far less than it was before the War. Therefore Farmers making purchases should take great care to see that every dollar spent buys Highest Quality and Labor Saving Value for the Farm.

Warner's "Limoid" (pure hydrated lime) is of high quality, and its Use on Soils where Lime is needed means Labor Saving.

Charles Warner Company
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HORTICULTURE

RAISING LETTUCE IN GREENHOUSES

Back on the home farm in eastern Maryland I used to raise lettuce for market, using cold frames and hot-beds in the early spring, but I think that my experience as a farmer in the army has shown me that there is more money in the greenhouse crop. Here, at an agricultural reconstruction farm, near Washington, D. C., we have a series of seven greenhouses devoted to vegetables and flowers, which are conducted directly under the army and run by soldiers as curative workshops for wounded over-seas men at a nearby hospital. I have been particularly interested in the lettuce, as I see more money in our methods here than in the way we grew lettuce on the home farm. The particular point that interests me is that lettuce can be grown to meet a high-priced winter market, and at a relatively small cost.

Making Ready to Transplant Lettuce

Since Christmas we have been producing at the rate of a thousand heads of good, marketable lettuce per bed. We have six beds in lettuce at a time, each bed being 5 by 155 feet. On some of the higher producing beds we actually took off something over 1,200 heads. On the nearby market, this lettuce was worth 10 to 15 cents a head wholesale or better than a farmer could ever do with lettuce from the open field. I hate to guess at the price which could have been received by a direct trade to the consumer or even at a farmers' market. The secret is that there is less competition from other sources during the early winter season, and the unusual happens and the farmer can have something to say about the price.

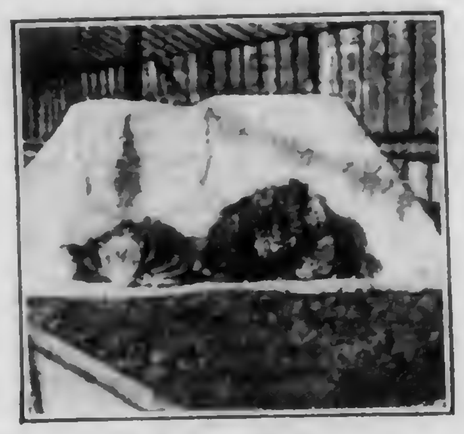
Starting the last week in September we prepared some seeding flats which measured 18 inches by 5 feet, and which were 3 inches high. At the bottom of the flat we put a thin layer of well-rotted cow manure, and above a well-textured loam soil, which was lightly fertilized by a handful of commercial fertilizer. The latter analysed 2 percent nitrogen, 8 percent phosphoric acid and 2 percent potash. The lettuce seed was scattered in a thin line in rows two inches apart. At that season of the year we needed no heat, not even at night in this latitude. All the care necessary was to water the seedlings as often as needed and to see that the soil was kept properly mulched.

Making Ready For the Transplants

Toward the close of the second week in October we started to make ready for the transplants in the greenhouse benches. After cleaning off the old soil and repairing the benches, we laid a couple inches of cow manure upon the boards and then covered with a good four inches of loam into which had been mixed a small amount of manure. We did not use any commercial fertilizer at all for this first crop, depending upon the manure entirely. The soil was smoothed with our hands and marked off with a wooden measure in blocks 7 by 10 inches. I went down the beds with a dibble and made a hole about two inches deep at the corners of the blocks.

Now we were ready for the transplants. The young lettuce plants were nearly three weeks old by this time and large enough so that they could be grasped readily with the thumb and forefinger. As on the farm, there was some variation in the size of the plants, due no doubt to the strength of the seed and soil irregularities. On the whole, the young seedlings had grown pretty evenly. One flat had more sun than the others and showed greater development; watering also played a part.

With no other care than watering and mulching, the plants grew steadily and at the beginning of December were ready to harvest. From seeding to harvest was about 70 days but it must be remembered that there was no artificial heat. The sun was pretty warm in the day time and the houses kept fairly warm at night. Then, too, we were favored with a good fall season this last year.



Big Boston Lettuce

Later Plantings Also Started

Meanwhile we had started some more beds in early November, which began to give us a harvest in early January. The heat was started in the greenhouses in mid-December which accounts for the more rapid growth of this lot. We proposed to have the night temperature 48 to 50 degrees, while in the day time it would run up to 58 to 62 degrees. Later crops in other beds maturing in February were ready for harvest in 55 days from the time of transplanting.

One nice thing about lettuce in the greenhouse is that the crops may be made to succeed each other on the same benches. We followed this plan and at this date February 10, are getting along fairly well on the third crop on some benches. However, by late February it will be too late to attempt a great deal with the greenhouse crop. The markets are better supplied in the spring when this crop would mature and we will soon be able to start the young lettuce plants in the greenhouse and put them in cold frames outside to mature. I have tried this, making two transplantings of the lettuce, and have gained a couple of weeks in time.

Altho we used no commercial fertilizer on the first crop in the greenhouse benches as we had done in the seed beds, it seemed advisable to put on the commercial mixture for the second and third crops. We did not use any stimulant to force the growth; nitrate of soda might have been used but it is the opinion of growers in my part of the country that it forces the growth too rapidly and makes the plants weak.

Variety a Popular Question

The Big Boston variety seems to have the favor of many commercial growers. We tried both this variety and Golden Queen for head lettuce, and the latter did the best with us. Perhaps the Big Boston has more prestige on most markets. I would like to grow these two varieties in larger quantities before deciding upon only one kind to grow. The Grand Rapids did splendidly with us for the curly, open type. This last season, the curly type was worth about the same on the local market and the plants could be set nearer together. The planting distance of 10 by 9 inches seemed about the right distance, or even 10 by 10 for large types. A nearby producer crowds his plants to 8 by 8 inches and fertilizes a little more heavily.

There is little trouble in preparing the lettuce for market. It so happens that we do not put the lettuce thru the customary channels here, as the patients at the hospital receive all of the crops. However, the same care is taken as if the lettuce was going upon the best market in the world. The outer yellow leaves are taken off and the dirt washed from the base of the head. We take particular care that the water does not get into the head; it would not keep so well if held for some time before using.—P. H. Benson.

CRAB APPLE CLUB SHOW

The annual fruit, vegetable and chrysanthemum exhibit of the Crab Apple Club will be held in the Horticultural Building on Pennsylvania Day, Saturday, November 8, 1919. The exhibit is conducted by the students in Horticulture, under the direction of the Department.

AN INCENTIVE TO GARDENERS

By J. M. SHELLMAN.

One of the principal reasons why the monument, constructed of fruits and vegetables, is built every year for the Cannstatter Folk Fest or harvest vestival, which is held in Baltimore at Monument Park, is that it is an incentive to gardeners to grow the largest and best fruits and vegetables to enter in the contest.

Due to the war, the festival was not held in 1918, but this year, the event was conducted during the week of August 25. One of the most notable exhibits which took a first prize, was an eleven pound cow beet. It is estimated that on one day of the week 30,000 people attended the festivities.

The fruit and vegetable monument was 42 feet high, topped by a plaster paris replica of the statue of liberty, measuring 8 feet high. The circumference at the base measured 64 feet. It required 8 men to erect it. The frame of cabinet work cost $900. The value of the fruit and vegetables with which the monument is clothed is estimated at $3,000.

An Horticultural Exhibit at Baltimore

Each day the fruit and vegetables that are spoiling are replaced with fresh fruit. The monument is kept up for one week during the festival; then the food that is all right is given away to people who come to get it.

While the affair was in progress, the children in the German Orphan Asylum, were given an outing at the park, and everything was free to them. They were taken there in street cars chartered for the occasion by the directors of the festival. After enjoying themselves during the day, they were given a supper, and each was presented with a box of candy. On another day, the inmates of the Aged Home were taken for an outing at the park.

Practically every kind of fruit and vegetable raised in Maryland around and in Baltimore was represented on the monument. Bermuda onions were used for the border of the flower like effects as shown on the base of the monument.

Men connected with one of the seed houses in Baltimore judged the fruits and vegetables.

The monument is topped with a shock of wheat, then the column immediately under this is faced with various nuts including green peanuts, pecans, English walnuts and hazel nuts. Continuing down, the rest of the structure is made up of various fruits and vegetables with the smaller columns faced with nuts.

Some of the fruits and vegetables in the monument are cantaloupes, watermelons, pumpkins, cabbages, peppers, cucumbers, Bermuda onions, carrots, rhubarb, string beans, celery, corn, cauliflower, sweet potatoes, citrons, lemons, grapes and many others.

The whole monument was electrically equipped so that at night it could be illuminated. The various designs were made of fruits of different sizes being systematically arranged according to the design to be followed.

USE AUTOS TO ROB FARMERS

Automobiles are used extensively by thieves in their raids on the farm orchards and truck gardens surrounding New York State cities.

Usually two or three thieves travel together in the same automobile. They make their trips into the country at night, driving into the farmer's yard and carrying off his fowls, and in some instances hogs and sheep. If the farmer or his family protest they are held up by one of the thieves while the others commit the robbery. Orchards and gardens are visited, potatoes dug in the field, cabbage, tomatoes and other products carried away.

These depredations some times take in a range of twenty or twenty-five miles around the city. The robbers drive swiftly, are always on the outlook for the authorities, commit their thefts early in the night and before morning they are back in the city with their load of plunder safely stored away out of sight in some fence's warehouse. As there is no means of identifying fruit, vegetables and such products it is difficult to secure convictions.

In the aggregate hundreds of thousands of dollars worth of farm products are stolen in the state in this way every year, and the losses from this cause are so heavy this season that farmers in the vicinity of several cities are exasperated over the situation.

The city police, town constables, and state mounted police have made little headway in curbing the activities of these robbers, and farmers are at a loss to know what to do. Unless they are afforded better protection by the authorities, it is evident that they will demand the right to organize vigilance committees and arm them with guns for the protection of their property. They feel that it is not fair to be asked by the city people to produce maximum crops and then thru inadequate police protection have their crops, their poultry and live stock stolen by organized gangs of city thieves traveling in automobiles.—E. E. R.

CELERY

Celery, by proper storage in the open ground, may be kept until Christmas. A trench is dug which is about 8 inches wide and as deep as the celery. This is dug and placed with the stalks close together in the trench. As the colder weather comes on, boards and leaves are used to cover the trench, and soil is thrown over the leaves to help keep out the frost. These trenches must be ventilated until freezing weather comes on, when they should be entirely closed.

Properly cared for seeds don't "run out." A Washington County, N. Y., man is growing oats successfully which have been in his family since 1778.

Nothing like Lambertvilles for working in the Barn yard

THE ACIDS AND AMMONIA of manure water won't rot the pure new rubber of these super-work boots.

Next time you buy rubber goods look up the dealer who sells Lambertville Rubber Footwear and have him show you Snag Proofs. These are extra thick, pure new rubber, properly cured. Feel their soft, elastic texture. Plenty of wear resistance there. You'll not care to look any further for rubber footwear this year.

There are four other qualities in the Lambertville line. You know them by the green label. Lambertville means "most for your money" in rubber goods.

It is nearly fifty years since the Lambertville Rubber Company commenced making Snag Proof rubber goods, and their line has grown with the years until now there are five green label qualities and more than thirty styles with the green label.

The best dealer in town sells Lambertvilles.

Look for the green label.

A Green Label on Every Pair of Lambertvilles.

SNAG-PROOF
7 layers of pure rubber friction lined. Thick and wear resisting yet light in weight.

L-QUALITY
Duck vamp where the wear comes. Pure rubber properly cured.

REDSKIN
Red rubber with friction or felt lining. Tough and long wearing.

LAMCO
Pure gum, ribbed, or with heavy thick vamp.

WHITESKIN
White rubber full duck lined. Made by an entirely new process. Extraordinary value.

LAMBERTVILLE RUBBER CO.
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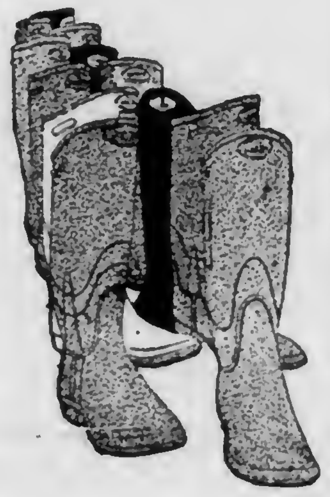

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Every bag of **TI-O-GA Dairy Feed** carries with it a practical, scientific service for the dairyman and each one contains the nutrients to form a balanced ration with available roughage grown on the farm with which it is intended to be used.

The available nutrients in home grown roughage are as valuable as those purchased in the grain ration and the best profit in dairying is in the saving effected by their proper use.

As the roughage varies in nutritive value, some being high and others low in protein, **it is impossible for any one feed to form a balanced ration with more than one class of roughage.**

TI-O-GA Feed Service groups all kinds of roughage into three classes in accordance with their nutritive content; those high in protein, those low in protein and those intermediate. Every bag of feed is proportioned in nutritive content to combine with the kind of roughage with which it is intended to be fed and with it form a balanced ration.

Red Brand TI-O-GA Dairy Feed to be fed with ensilage, pasturage, green fodder or low protein roughage.

White Brand TI-O-GA Dairy Feed to be fed with medium protein dry roughage.

Blue Brand TI-O-GA Dairy Feed to be fed with high protein dry roughage.

Full feeding instructions and classification of roughages will be found with every bag of **TI-O-GA Feed.** Every bag is guaranteed satisfactory when fed as intended.

Inquire of your dealer. Book on **TI-O-GA Feed Service** containing valuable information on feeding and conservation of home grown feeds sent on request.

The same careful service is furnished in the preparation of:

TI-O-GA Brood Sow and Pig Feed.
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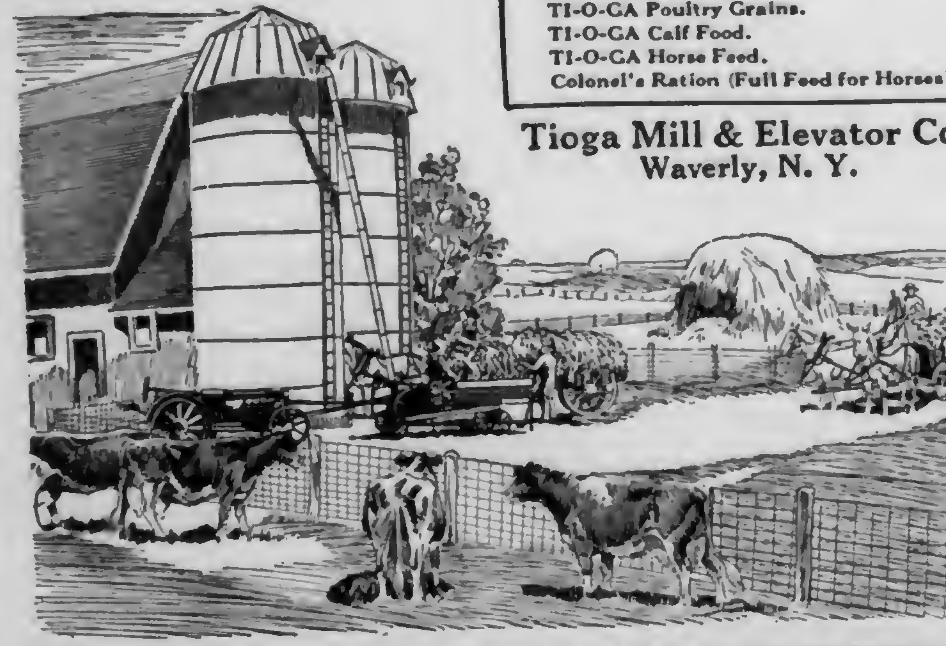
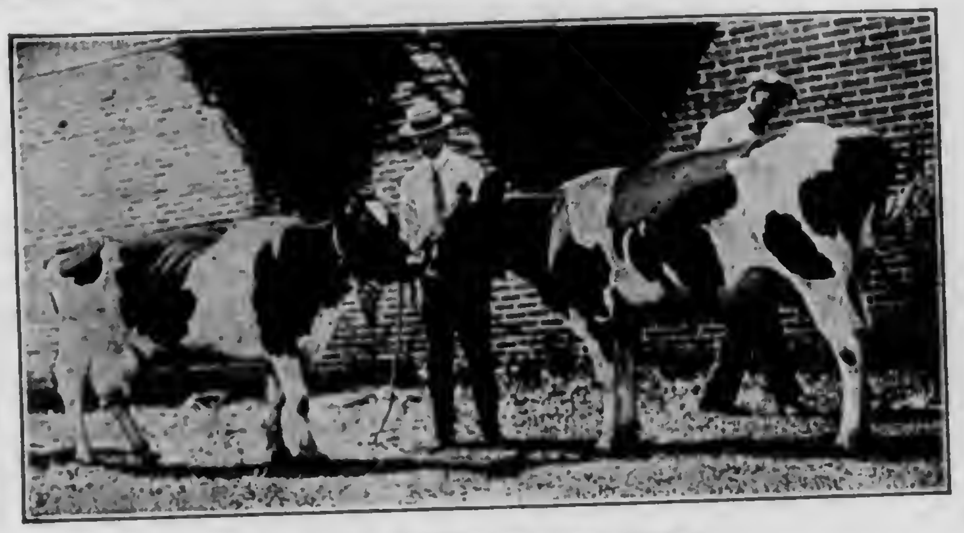


DAIRY

Cow Testing in Chester County

The first cow-testing association in Chester County was organized the first of March, 1919. Since then six other communities in the county have taken up the good work. This affords convincing proof that the progressive dairy farmers of this county have awakened to a realization of the fact that knowledge is power in the dairy business; and that the scales and Babcock test are the most reliable source of information to the farmer who is interested in building up a herd of profitable producing cows. The growth of the cow-testing idea in Chester County also indicates that economical production is one of the first problems to consider in profitable milk, or butter-fat, production.



WHICH IS THE BETTER COW?

Some dairymen would choose the cow with the large udder, but records show that she is a low producer. Her mate at the right produced nearly 100 pounds more buttor fat in 1918.

The result from the first few months' records of our herds proved an eye opener to many of our farmers who thought themselves pretty good judges of dairy type and production. Some of their pet cows have proved very unprofitable when measured by their actual milk and butterfat production, while others which they considered less valuable have demonstrated their ability to produce profitably. Not only is this much so, but the keeping of records has made it possible for the feeder to work out rations suited to the individual requirements of each cow in the herd, rather than to feed the low producers more than they could economically digest and assimilate, and to withhold feed from some of the better producers who had a capacity to give profitable returns per pound of grain feed added to their ration. By cutting down the amount of grain fed to the low producing cows, and adding it to the amounts fed to the more profitable producers it was possible to secure greater production at less cost than by feeding in the old fashioned, hap-hazard way of giving each cow the same amount of feed regardless of her capacity to make efficient use of high-priced feeding materials.

One of the advantages of being a member of a cow-testing association is the pleasant and helpful rivalry that springs up among the men in the association. It is not natural to like to have the other fellow go us one better than we are capable of doing. If a neighbor's cows are doing better than his he wants to know the reason why, and if possible, to improve his methods. Perhaps he will go and see the herd milked, or study his methods of feeding and watering. He studies the record of his rations and goes home prepared to correct his mistakes. One cannot long be a member of such an association without feeling a new interest in his herd and without taking a much greater interest in the welfare of those associated with him. With each member more interested in his own work, and feeling a new interest in the herds in his community there develops a more desirable situation in the entire community; and pretty soon this situation is known in adjoining parts of the county until other communities take up the work.

Probably, the greatest benefit comes to the beginners in the business, who develop a stronger desire for success. The well-managed cow-testing association is really a modern school for dairy methods. The tester is not always capable of instructing the members, but the good things he is able to carry from one farm to the other help mightily in the general upbuilding of the business on the farms where he is employed. If Green's cows are making excellent records, Brown at the other end of the township is anxious to know how he is feeding; and it is a safe bet that he will manage to find out when he has an opportunity.

One of the most striking examples of the benefits of knowing what each cow in the herd is capable of producing and following the advice of the man who is doing the testing in making up grain rations is indicated by a report from the herd owned by Joseph Phipps. In discussing the benefits from cow-testing work in his herd Mr. Phipps said:

(1) "I discovered two unprofitable cows in my herd which I promptly sold and replaced by two more profitable cows. This resulted in a saving of feed and a higher average production for my herd.

(2) "I purchased a pure bred dairy sire to insure heifer calves worth raising. At present prices of hay, grain and labor I could not afford to raise cows of inferior quality

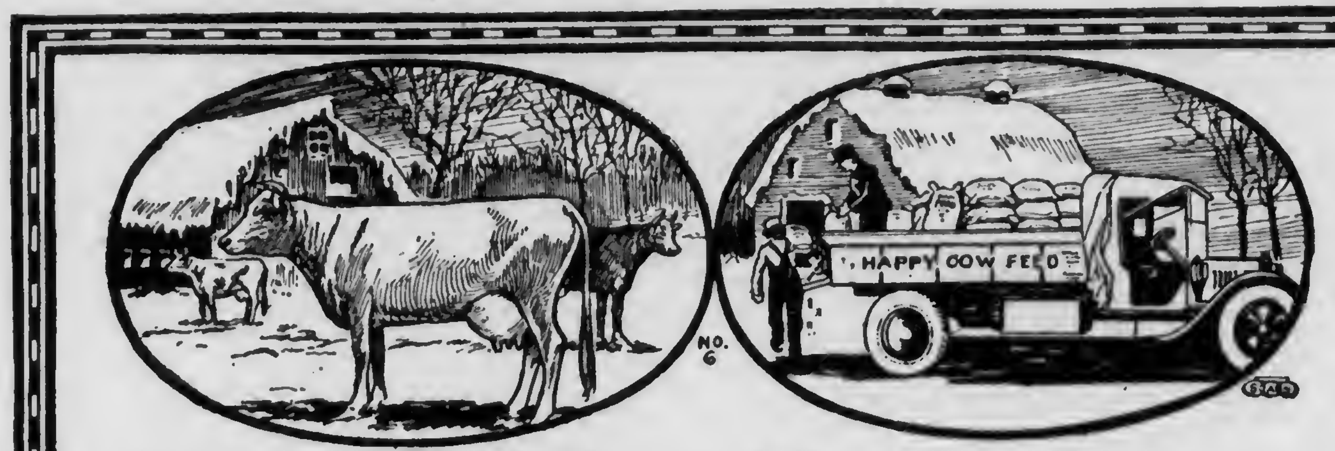
for my producing herd. This pure bred bull should aid materially in improving the productive capacity of the heifer calves born in my herd. By continuing along these lines it is my intention to breed up my herd to high average production so that so many of the young heifers I raise won't turn out to be failures when they become of proper age to take their places in the milking herd.

(3) "I am going to raise heifer calves from my best cows. I believe that one should give proper consideration to the type of the cow and the individuality of the calf as well as to the milk and butter fat records of the dam. By selecting the good heifer calves and developing them properly I hope to build up a high average production in my herd.

(4) "I have found that feeding a grain mixture of 200 pounds of corn and cob meal, 200 pounds of ground oats and 200 pounds of bran at the rate of one pound of grain to four pounds of milk produced has resulted in increased production at less cost than before I began to investigate the feeding problem from the standpoint of the individual requirements of my cows. In fact, my records show that the production of my herd has nearly doubled, and all of this has been accomplished on practically the same amount of grain feed as I fed before joining the association. In 1918 my herd produced 37,790 pounds of milk in the six months period from March to October; while the same herd, with the exception of the two new cows bought to replace the two weeded out, have produced 72,251 pounds of milk during the same period in 1919; the average production per cow having been raised from 2,110 pounds per cow to 4,014 pounds for the same period. At present I am confident that my herd will go above the 8,000 pounds per cow average for the year. This is not a remarkable average for the year, but it is a great improvement over the averages of the past few years, and I feel that I am on the right road to increased dairy profits and in a short time will have changed my business from a losing to a paying one.

Less than ten years ago there was only one of the herds in the Uwchland Cow-Testing Association that contained pure bred animals. This was the herd of Thomas and Howell, but today we have ten men in our association who have seen the light and started out to develop herds of pure bred cattle. At present Holstein-Friesians and Guernseys are taking the lead. Nine of our members who have grade herds have purchased pure bred sires and it is safe to say that most of these sires have been purchased as a result of the educational benefits derived from our association work. That many grade animals have demonstrated their ability to produce profitably may readily be understood from a study of the milk and butter records of the ten best cows in the association for the combined months of April, May, June and July.

In spite of the fact that other counties in Pennsylvania boast of the progress they have made in dairy farming, Chester County has more dairy cows, and is producing more milk than any other county in the state. And, now, that our farmers have awakened to the importance of building up their herds thru the work of cow-testing associations and the continued use of pure bred dairy sires it is sure to develop into one of the leading dairying counties of the United States.—F. H. Strickland, Chester County, Pa.



WINTER MILK PRODUCTION

Owing to too much pasture and too little protein during the Summer many cows will go into the Winter season in poor condition. Put your cows in condition quickly by feeding them

Happy Cow Feed
(24% protein)

This complete dairy ration will produce more milk, pound for pound, than any other feed you can buy at any other price. It is a feed that cows eat greedily, yet they are satisfied on a lesser number of pounds than any other feed you have used.

It took us years to perfect Happy Cow Feed. There is no guesswork about it. We experimented with many combinations on our own cows and other folks' cows, before we got it just right.

Happy Cow Feed is the ration that is just right for dairy cows. It does not contain too much or too little of any one thing, and it is exclusively a ration for milk production.

Happy Cow Feed is made of cotton seed meal, corn meal, cocoanut meal, wheat bran, velvet bean feed, unhulled peanut oil feed, alfalfa meal and a small amount of salt. This makes a complete feed.

You can't beat this combination of ingredients. Everyone of them is good for feeding dairy cows. Some of them are grown only in the South. Properly combined they make a wonderful ration.

All Happy feeds are pure. They do not contain any refuse material of any sort. We do not buy or use oat hulls, rice hulls, cotton seed hulls, or other low grade materials.

We are heartily in favor of an honest feed law to protect feeders as well as manufacturers who are doing business on an honest basis. You should be interested in the Lever and Haugen bills now before Congress.

Put your cows on Happy Cow Feed at once. Buy through your dealer. If he does not sell Happy Cow Feed send us his name and we will see that you are supplied.

HAPPY COW FEED

Address Dep't 148
Edgar-Morgan Co., Memphis, Tenn.

SOBEL

Spend a cent before You Ship 1¢

Before you ship your furs elsewhere, send us a postal card for our price list. It will pay you. Costs only a cent to find out. You will be astonished at the prices we pay. Send quick. We need shipments now and will pay you well for your pelts.

RAW FURS

Those desiring to ship at once can do so in confidence. We guarantee highest prices and liberal assortments. Our 33 years experience is your protection.

Prices are soaring high right now. This means we can pay you more than ever before. Ship immediately or send for price list. Act quick!

PRICE LIST FREE WRITE TODAY

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As low as $10

Don't depend on coal these days. Install a Hertzler & Zook Portable Wood SAW and be sure of your fuel supply. Easy to operate. Our No. 1 is the cheapest and best saw made to which a ripping table can be attached. Guaranteed for 1 year. Money refunded if not satisfactory. Write for catalog.

No. 5

HERTZLER & ZOOK CO., Box 29, Belleville, Pa.

MORE $$$$$ FOR Your RAW Furs IN NEW YORK

My Prices Are Guaranteed

Beware of High Price Lists sent out to deceive you and get your furs. The higher they quote the less you get.

The secret of a square deal is honest grading at market prices. I guarantee my price until next list is issued and will not quote more than I can pay on an honest assortment.

Enjoy that peace of mind that comes to a shipper when he knows he is shipping to an honest firm.

You will make no mistake shipping to me and be glad you made my acquaintance.

HONEST GRADING
HONEST PRICES

No commissions deducted. I pay express & parcel post charges. Prompt returns guaranteed.

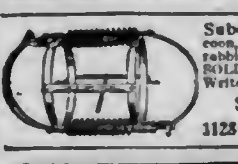
Write at once for Price List, while you have me in mind.

BENJAMIN DORMAN
147 W. 24th ST. NEW YORK

RAW FURS WANTED

Mr. RAW FUR SHIPPER—
We want your raw furs. Put your own assortment on them and mail us a copy. If we cannot net you more than you expect, we will return them to you, express paid. Our price list is yours for the asking.

Milton Schreiber & Co.
RAW FURS
Dept. W
138-140 West 29th St.
NEW YORK CITY



Sabo Sure Catch Trap for fox, coon, skunk, possum, ground hog, rabbit, etc. Place in animal's burrow. SOLD DIRECT at factory price. Write for booklet. Agents wanted.

SABO TRAP MFG. CO.
1128 W. 25th St., Cleveland, Ohio

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Ship your furs here. Our prices are record breaking high. We pay all your shipping charges on shipments of $20 and over. On shipments of $100 and over you get 5% additional and a liberal assortment. Put your own valuation on. We will hold them separate on request. Price list and Trapper Guide sent free on request

HARRY LEVY 145 W. 25th ST. NEW YORK

Read what a trapper writes:
Mr Warenoff. Dear Sir:—I am shipping you today 1 bag of furs; it is no use for me to grade them as you have been giving me very good grades. Jacob Yost, Dillsburg, Pa.

We do not claim to pay the highest price in the world—but we do claim and absolutely guarantee to give you every dollar your pelts are worth—often more than you yourself expect.

RAW FURS

We have a good many letters on file, all same as above, and unsolicited. You too will soon realize that there is more than a promise to our way of doing business. Try us and be convinced.

Send us a shipment today or write for our price list. It's free. We know our grading will please you so hurry up and connect with us. It's up to you.

Sol Warenoff & Co., Inc., 156 West 25th Street, New York City

Carbide Gas Lights 24-Hour Shifts
—Cooks Your Dinner
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THE same brilliant powerful white light that makes continuous construction work possible in subways, tunnels and mines

(such as the gigantic Catskill Water Supply System, the Panama Canal, and the N. Y. Subway)

is already lighting over 250,000 country homes, besides supplying gas for the cooking stoves and for the sad irons that take the sadness out of ironing day.

Wherever machinery breaks, Carbide Gas is welding the parts together—on railroads, in shipyards, factories and plants—big and little—all over the wórld.

The story of Carbide reads like a story out of the Arabian Nights—of miracles accomplished between sleeping and waking.

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Dept. 109

903

LET US TAN YOUR HIDE.

Horse or Cow hide, Calf or other skins with hair or fur on, and make them into coats (for men and women), robes, rugs or gloves when so ordered. **Your fur goods will cost you less** than to buy them and be worth more.

Our Illustrated catalog gives a lot of information. It tells how to take off and care for hides; how and when we pay the freight both ways; about **our safe dyeing process** on cow and horse hide, calf and other skins; about the fur goods and game trophies we sell, taxidermy, etc.

Then we have recently got out another we call **our Fashion book**, wholly devoted to fashion plates of muffs, neckwear and other fine fur garments, with prices; also **fur garments remodeled and repaired.**

You can have either book by sending your correct address naming which, or both books if you need both. Address

The Crosby Frisian Fur Company,
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AUTOMOBILE CO.
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ROADSTERS
TOURINGS
ENCLOSED CARS
1000 to Select From
$250 Up. Easy Terms
See Us and Save Money
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231 North Broad Street, Philadelphia
Catalogue Sent Upon Request
Live Agents Wanted

Skunk and Muskrat Wanted 24 years in the fur business. I have no rents to pay, sell direct to manufacturers and can pay you top prices for all kinds of furs. Send me a trial shipment; if I please you, tell others; if not, tell me.

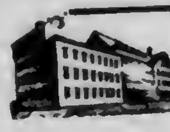
George Sipler, FUR DEALER THREE BRIDGES, N. J.

SKUNK We pay highest cash prices for all staple furs—Skunk, Mink, Muskrat, Raccoon, Red Fox. Fancy furs a specialty, including Silver and Cross Fox, Fisher, Marten, etc. Est. 1870. Our continued prompt returns and liberal policy are now bringing us shipments from all North America, Alaska to Mexico. Send for free Price List. Address, M. J. JEWETT & SONS, REDWOOD, N. Y. Dept. 12

FREE INFORMATION

Largest returns on your small catch of furs. We are tanners and manufacturers of cattle and horse hides for coats, robes, rugs and mittens. Ladies Furs from coon, opossum, fox, muskrats, mink, coyote, badgers, skunk and rabbits. Taxidermist work on deer heads and rugs. Tell us the kind of fur you have and we will answer fully.

W. W. WEAVER, Custom Tanner, Reading, Mich.



SEND FOR PRICE LIST ON
Muskrat, Skunk, Etc.
AL. SHAWAKER
437-449 E. Rich Street
Dept. L, COLUMBUS, OHIO

SAY you saw the advertisement in Pennsylvania Farmer when you are writing to our advertisers.

SELECTING DAIRY COWS

The importance of keeping good stock in the dairy herd cannot be overestimated. Not all pure bred cows are profit-makers and certainly many grades and nondescript animals are of rather uncertain value. The writer recently inspected the herd of a very successful dairyman. Many of this man's ideas concerning the selecting of good cows are well worth careful consideration. Of course one must keep in mind the purpose for which the milk is produced. If milk is sold for city consumption, the object will be to get a large flow of milk of good quality. If butter is produced it is important to get a maximum yield of fat. For butter and cheese making, rich milk is desirable. Often the cheese-maker makes butter at certain seasons of the year.

Many herds average less than 400 gallons of milk per cow for the year. Certainly there is no profit for the owner of this kind of cows. When this yield is doubled the chances for profit increase; the cow that produces 1,000 gallons of milk of good quality is a profit-maker. It costs little more to keep a high producing cow than one that produces but little.

Pure bred animals are usually better producers than grades, yet it is often possible to pick up a grade heifer that will develop into a high producer. There are certain characteristics which indicate dairy capacity.

First, the cow's temperament. Is she quiet? The flighty, nervous animal is seldom a profit maker, altho a high producer has a tendency toward nervousness. I like a clean coat, long neck and prominent eyes, set rather far apart. Much may be told as to the creature's disposition by the expression of the eyes. Looking at the animal from the front, she should appear somewhat wedge-shaped, that is, the neck should be thin and rather long and the shoulders lighter than in the beef animal. Hips should be wide apart and the abdomen should be of ample capacity. Flanks should be rather thin and the back, viewed from above, should appear thin. Thighs must be so built as to allow plenty of room for a large udder. The tail should be long and tapering. Note how the animal walks. Does she walk with a free swinging motion or a sort of swaying roll? The free swingng motion indicates well-set bones and plenty of room for the udder, while the cramped swaying motion indicates lower production.

The udder should extend well forward and be ample and well-rounded at the back. The teats should be perfect and neither too large nor too small. See that the opening is ample and that the milk draws easily. Cows with small teats should not be purchased and on the other hand there are some with teats too large for the hand to grasp readily. Easy-milking is one of the points to be considered. The milk veins should be prominent and well branched and the milk wells, where the blood vessels enter the body, should be well developed.

Certain points indicating the quality of the milk should also be considered. For instance, the hair should be of a velvety texture, the skin should be loose and thin and somewhat oily. Ears of a deep yellow color inside indicate a good color in the butter produced. The horn, yellow at the base, also indicates the same quality. In selecting cows of no particular breeding to be used in the dairy herd, I would choose the ones with heads of the Jersey type. My experience indicates that this is likely to indicate better capacity for profit-making.

One will often find that the good milker is thin, hence do not look for plump animals when purchasing for the dairy herd. The fat condition often indicates that the cow is not producing highly. This, however, is not always the same. The loose knit frame, deep chest and wide-apart ribs indicate large lung and heart capacity, hence a robust constitution. Wide and open nostrils also indicate large lung capacity.—C. H. Chesley.

NEW PENNSYLVANIA JERSEY CHAMPION

By producing 9609.9 pounds milk and 543 pounds butter-fat in one year, the Jersey cow, Sans Aloi's Lady Eurybia, becomes the Champion Senior three-year-old Jersey of Pennslvania. Sans Aloi's Lady Eurybia began her test at the age of three years and eleven months. Her record of 543 pounds butter-fat passes the one made by the former champion, Oxford Speckled Maiden, by 16 lbs. Oxford Speckled Maiden produced 9274 pounds milk and 527 pounds fat in one year.

The sire of Sans Aloi's Lady Eurybia is Sans Aloi, sire of eleven Register of Merit daughters. Sans Aloi is a full brother to Financial Countess' Lad, which bull was sire of Financial Sensation. A little more than a year ago Greystone Jersey Farms bought one half interest in Financial Senator for $30,000. The dam of Sans Aloi is Financial Countess. At one time this cow was the champion milk and butter cow of the Jersey breed. That was when she produced 13,248 pounds milk and 795 pounds butter-fat in one year.

KILL THE BILL

Congressman Sabath of Chicago has lately introduced a bill (H. R. 10032) "To change the name of oleomargarine to butterine, to change the rate of tax on butterine, etc." That will make no distinction between colored and uncolored oleo in tax rate and will only make that tax that which is at present levied upon uncolored goods, ¼ cent per lb. There is to be a paltry $3 charged retailers for license fee, and proportionate fees charged wholesalers and manufacturers. To use the name "butterine" is in itself an admission that the oleo interests intend to make all the capital possible of the name "butter." To remove the former tax from colored goods will flood the market, of course, with goods that will pass for butter at the hands of all unscrupulous dealers.

The Pennsylvania law with its fine system of inspection, and adequate license fees is certainly one that should be copied thruout the land by all states and National Government. The butter interests have no fear of consumers failing to recognize the greater value of butter and to pay for it an adequate price, but consumers must be protected from buying oleo when they want butter. This bill which has been introduced at Washington must be watched and Congressmen should be warned of its vicious provisions.—Balderston.

Don't think of the pressure cooker as impracticable. It is convenient, durable, and easy to manipulate.

There are two ways to can corn. One is in cans and the other is in the silo. Can all you can both ways.

Don't send a cent!

Order From This Advertisement

H. C. Phelps
You or your neighbors know me. I have warm friends all over the United States made by my Square Deal in the Split Hickory Vehicle business.

I'll Put This Magnificent $150.00 MASTERTONE Phonograph in Your Home—I'll Send You a Selection of Fine Records to Play It With—All Without One Cent Down. You Satisfy Yourself

I'm Making This Free Offer

—to the honest, substantial folks, like the hundreds of thousands that have bought my fine buggies and carriages in the last 20 years. *I'll trust you to the limit*—for I know that you do business on good faith, just as I do. I went into the phonograph business some years ago because I believed there was a way to put the biggest, finest phonographs in your homes—*at half or less than half the prices charged for such machines.*

Now my plan is ready for you. It beats anything I have ever done or anything anybody else has ever done with a *real phonograph.* First you get it in your home to try absolutely free. Then you send me the low price only because you are perfectly satisfied—because you would not part with the MASTERTONE. Or, if you are not satisfied I'll take it back, and you keep your money.

You Simply Fill Out and Mail the Coupon

Send no money—no pay of any kind. Back comes the MASTERTONE and with it six fine *record selections* to play.

It is one of the three greatest phonographs in the world. Experts say the MASTERTONE reproduces the human voice, the piano, the violin, the music of famous bands with clearness, sweetness and naturalness all its own. You'll notice the freedom from roughness when you compare it with others.

You use the phonograph and the records as your own for ten days. Play it for your family, your neighbors, your friends. Take a vote of the whole family on it—and if you don't say it is as fine as any phonograph costing twice as much—if you want to part with it for any reason—I'll take the phonograph and the records back and you won't be out one cent of the purchase price.

Big, Beautiful Cabinet in Mahogany or Walnut

You have your choice of either Black Walnut or Mahogany finish. My royal MASTERTONE has a big artistic cabinet—48 inches high, 20 inches wide, 23½ inches deep—*the latest art style*—as beautiful as any you ever saw at any price. Make your choice—fill out the coupon—answer all the questions satisfactorily—do it today. I'll send the MASTERTONE to you *at once.*

Hear it and you will know why I am so willing to put it in your home without any money down—why I am willing to send it to you with six fine record selections—so you and your family and your friends can appreciate its real value at first hand.

You Try My MASTERTONE In Your Home Ten Days. If You Want to Keep It Send Me Only **$79.50**

How can I sell it at that price—half or less than half what such phonographs cost? *Simply by selling direct to you*—by having no expensive connections—no high-priced sales methods. This advertisement is my only salesman. At my one small profit my MASTERTONE makes many sales, because every one of your friends will want a MASTERTONE when they hear it, and see how much better it is than the ordinary.

I send you my written absolute Guarantee of my MASTERTONE. I can not begin to describe its superior mechanism—the 29 ways in which it excels other phonographs. You have to *hear* the MASTERTONE Reproducer—the greatest advance in phonographic improvement—with genuine imported India mica diaphragm. You have to hear its Patent Tone Modulator. You have to *enjoy* the records played by the MASTERTONE'S velvety, silent motor.

My MASTERTONE plays 4 to 6 records at one winding. Automatic Stop stops the machine at end of record.

Now—fill out the coupon today. Don't delay—for I want you to get the MASTERTONE as soon as possible. The first in each neighborhood will be the fortunate ones—for there will be a rush to take advantage of my offer. This is the first time I have ever published it.

Whether You Order My MASTERTONE or Not, Get My Free Song Book

Write for the MASTERTONE Book whether you order or not. Your name and address on a post card will bring you full description and illustration of the phonograph in colors. I will also send you *FREE* my Book of Old Favorite Songs—the old-time melodies that everybody loves—50 famous songs—words and music. Write today.

H. C. Phelps, President, THE PHELPS FACTORIES, Dept. 103, Columbus, Ohio

The Phelps Factories, Dept. 103, Columbus, Ohio

Gentlemen: You may send me one MASTERTONE Phonograph in ....finish (you have choice of Walnut or Satin Finish Mahogany) on your ten days' free trial offer. I agree to pay the transportation charges and if after ten days' trial I find it perfectly satisfactory in every respect, I agree to send you $79.50 in full payment within ten days from receipt of Phonograph. It is understood that this does not place me under any obligation to keep the Phonograph. If for any reason I am not satisfied with it and do not want to keep it, I agree to return it at your expense. It is understood that the Phonograph remains your property until I pay for in full.

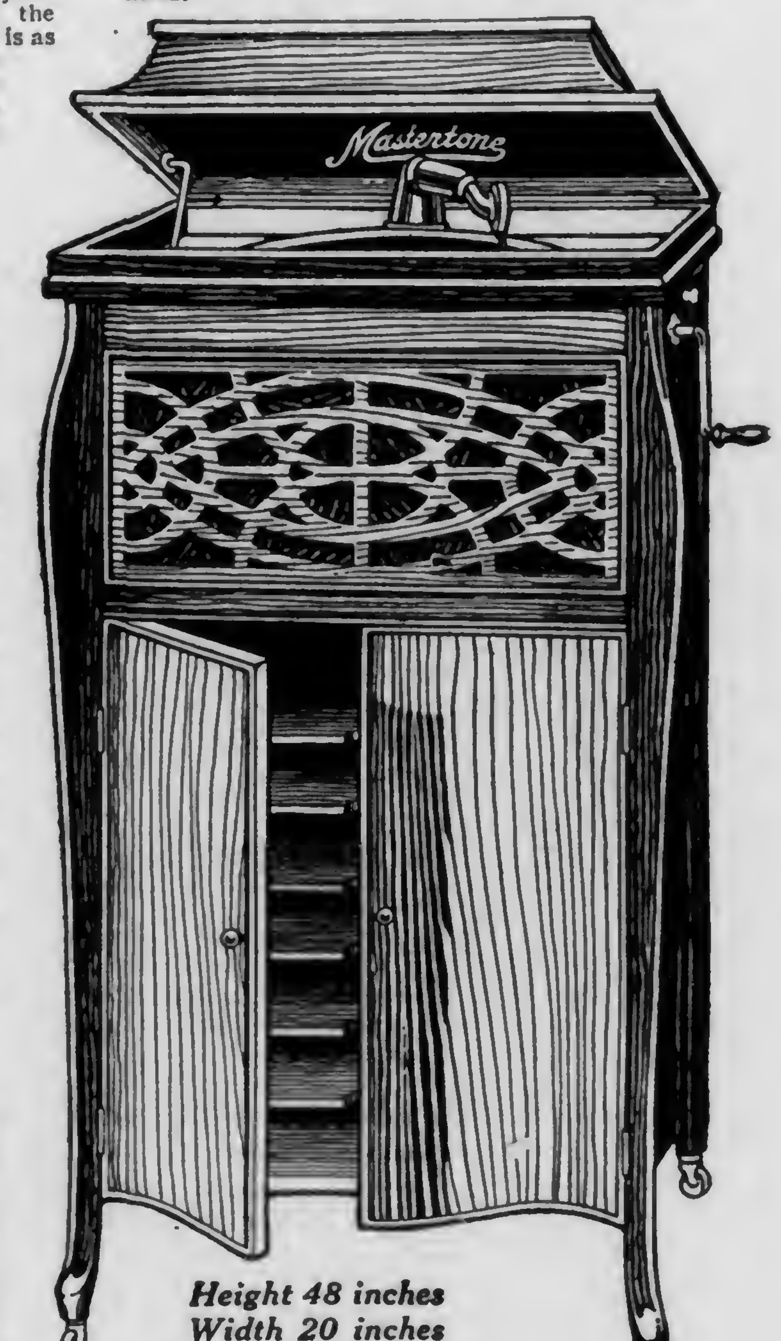
Name...Town..

State...St. No. or R. F. D..

Do you own property? If so give description and name of bank or any one else you desire to give as reference. Give complete description of property and names of references on separate sheet of paper.

Shall we ship by freight or express?..

NOTE: We recommend that you have Phonograph shipped by express to insure its reaching you promptly.



Height 48 inches
Width 20 inches
Depth 23 1-2 inches

PLAYS ALL RECORDS

Furnace going full blast—only using one room!

Coal costs too much to waste these days.

Then why feed the furnace, just to keep one room comfortable?

It's entirely unnecessary. A Perfection Oil Heater will give ample heat for any room and you can carry it with you from place to place.

PERFECTION
OIL HEATERS

No mussing with coal or wood, no waiting for the fire to "burn up"; a Perfection lights at the touch of a match and gives off full heat at once.

Smokeless, odorless and absolutely safe. You *can't* turn the wick too high.

This handy heater will save you at least a ton of coal this fall and help keep fuel bills down all winter long.

Rayo Lamps
Don't strain your eyes with a lamp that is too weak or too glaring. Rayo Lamps are just right. Their mellow light rests the eyes.

See the various models at your dealer's today—you'll be surprised how inexpensive they are.

ATLANTIC Rayolight Oil costs no more than ordinary kerosene and one gallon will burn for ten hours in your Perfection Oil Heater. Best for Rayo Lamps, too

THE ATLANTIC REFINING COMPANY
Philadelphia Pittsburgh

ATLANTIC Rayolight OIL

Not Laying Yet? Start Them!

YOUR hens and pullets should be producing eggs—making *profits*—by now. Hens should be over their molt—pullets developed—both on the job. Egg prices are *up*—it's up to you to cash in *now*—and all Winter.

Pratts Poultry Regulator

Invigorates and strengthens—hastens maturity—starts fowls laying weeks earlier. Prevents losses—economical to use—costs about a cent a month per hen. Test Pratts Poultry Regulator at our risk:

"Your Money Back if YOU Are Not Satisfied"

Sold by 60,000 dealers. There's one near you

Write for Pratts NEW Poultry Book—Free

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HAY
W. D. POWER & CO. 601 W. 33 St., New York, are the largest handlers of commission hay in greater New York; if you have hay to dispose of communicate with them.
HAY

PIPE second hand. Large stock all sizes furnished with new threads & couplings. Prompt shipment. J. F. Griffith, 416 Meyer St., Phila.

POULTRY

FINDING THE BOARDER HEN

(Continued from Page 3.)

why one was good and the other was poor. In two cases where trap nest records had been kept previously, Mr. Knandel, without knowing this, picked out the best layer in the pen. This helped to demonstrate the practical value of this work. After Mr. Knandel gave his talk he would pass the different birds around for those present to examine, so that they might clearly see the characteristic differences. Then in a number of cases Mr. Knandel went into the pen and helped the farmer cull his flock, separating good producers from the poor.

Demonstration Flocks

In addition to this work it was decided to run several demonstration pens in the county. In these pens a flock was separated into good and poor producers. The farmer then kept records of the actual production of each pen. Three of these demonstration pens have been run the past year and the results are as follows:

Demonstration Number 1.—Run in August.—Harry Reitz's Flock.

20 Good Hens Selected laid 135 eggs in 18 days.

20 Poor Hens Selected laid 43 eggs in 18 days.

The results show on a hundred hen basis the following: The good hens laid an average of 37.5 eggs per day. The poor hens laid an average of 12 eggs per day. This shows a difference of over two dozen eggs per day on a hundred-hen basis.

Demonstration Number 2. Run in August.—H. D. Lynch's Flock.

23 Good Hens Selected laid 222 eggs in 18 days.

14 Poor Hens Selected laid 65 eggs in 18 days.

The results show on a hundred-hen basis the following: The good hens laid an average of 54 eggs per day. The poor hens laid an average of 25 eggs per day. In this case the good pen on a hundred-hen basis laid over twice as many eggs as the poor pen.

Demonstration Number 3. Run in December.—T. M. Stahlman's Flock.

40 Good Hens Selected laid 135 eggs in 30 days.

60 Poor Hens Selected laid 4 eggs in 30 days.

The results on a hundred-hen basis show the following: The good hens laid an average of 11.25 eggs per day. The poor hens laid an average of 0.22 eggs per day. In the case of the poor hens it took on an average, the hundred hens all working together, about five days to lay 1 egg.

In all of these demonstrations both pens were treated exactly alike. They were fed the same, and conditons were similar under which they worked, but the one pen of birds showed they had the ability to produce eggs, while the other pen of birds did not, and never would produce the same number under similar conditions. The hens on the farm of Harry Reitz had been running in the fields before selection, but after selection both lots were kept in pens. This naturally resulted in a decrease of the quantity of eggs from normal.

Care of Flock

In addition to the selection work, it is essential first of all that a good purebred strain of poultry be kept. This insures a uniformity of product. Then they must have proper housing facilities in summer and in winter. In the summer, where at all possible, they should have field range. It is essential also that the birds at all times be fed properly; that they be given a balanced ration as certain elements are necessary to produce eggs. When these are not furnished the hens cannot be expected to produce at maximum. It should be seen to that they have plenty of fresh, clean water, sunshine and litter.

It is rather hard to check up on definite results obtained from such educational work, but from data obtainable it is believed that at least five hundred farmers have this fall paid attention to selection work on their farms and that steps in these cases have been made towards better egg-producing flocks. One case in particular is that of a man who, before he started to select his good hens, had an average egg production from his flock of 63 eggs per hen each year. By selection the first year he increased the average production to 110 eggs, and this last year his average egg production was 147 eggs per hen. This record is not unusual. It shows what can be done by a little selection work. With the farmers now awakened to poultry selection, more definite results can be secured.

FEEDING NEW CORN

It is advisable to add new corn to the poultry ration gradually rather than risk digestive troubles by placing them on a strictly new corn diet at once. It is always best to feed a mixture of grains as too much corn is fattening. When gathering corn for poultry feeding it pays to throw out all mouldy ears as mouldy feed will seriously injure poultry.

Corn is a favorite grain feed of hens and they will eat it in large quantities and they should be forced to exercise for it. Throw shelled corn in the litter in the morning so they will have to scratch. At night the important point is to send the birds to bed with a full crop and the exercise is not so important. Ears of corn can be chopped up in small sections and the hens will obtain exercise by pulling the kernels from the cobs. Cutting the cobs with a diagonal blow of the hatchet will loosen a part of the corn to encourage the birds in pecking it off.

When there is a good crop of corn in the community the poultryman can do a good stroke of business by carefully estimating his needs. Then if there is not enough corn produced at home it can be purchased in the neighborhood and save a trip to town and back, as well as the middleman's profit. There is much satisfaction in having a good crib of corn on hand during the cold days of winter. Poultrymen do not generally have enough storage room for corn and it seems as if the metal cribs ought to be a good investment. The feeding of poultry attracts mice and rats and if the stored grain is not carefully protected it means that the poultryman must stand the cost of feeding a colony of pests, usually in spite of his efforts to exterminate them.—K.

FARMERS' NATIONAL CONGRESS

The joint opening session of the Farmers' National Congress, Farm Women's National Congress, Maryland State Agricultural Society and affiliated organizations was held Tuesday, October 28, J. H. Kimble, president of the Congess, presiding.

The most important transaction of the morning session was the unanimous adoption of a resolution pledging the support of all the organizations represented in that meeting to President Wilson and all agencies of the Government for the orderly conduct of national affairs and the fearless administration of national laws in this critical period of our history.

Governor E. C. Harrington held the delegates' attention while he made an interesting and sincere address of welcome on behalf of the state. The Governor paid a fine tribute to the agriculturists of the country and assured them that the state is theirs while they are here and that Maryland is highly honored by their presence. The first citizen of the State extended a hearty invitation to the Congress to visit Baltimore and Annapolis.

O. G. Smith Vice-President of the Farmers' Congress, in replying to these addresses of welcome expressed the delegates' deepest appreciation for the hearty welcome extended them, and spoke of the problems confronting the Congress in connection with the unrest apparent in our country.

A very instructive and interesting address was made by A. P. Sandles of Ohio on "Roads and Highways."

President E. A. Cockey called the Maryland Sheep Growers' Association meeting to order and the report of the Secretary-treasuer was heard, followed by an address by A. C. Bigelow.

Following the reports of various committees, F. R. Marshall, of the United States Department of Agriculture, addressed the session on "The Relation of Sheep Husbandry to American Agriculture."

Then Prof. W. H. Tomhave, of Pennsylvania State College, spoke interestingly to the delegates present on "The Essentials of a Stable Sheep on Eastern Farms." Adjournment followed a discussion and the election of officers.

At the meeting of the Maryland Horticultural Society the annual address of the president, A. P. Snader, followed the report of the secretary-treasurer.

This address was followed by that of Prof. S. A. Beach, Iowa State College, on "The Future of the Fruit Industry."

The State Dairymen's Association met in the court room Thursday morning with a large attendance. The report of the secretary was dispensed with and insteead Dr. A. F. Woods of State College delivered a very able address, emphasizing the advantages of organization and cooperation.

Prof. J. A. Gamble, State College, gave a very interesting and instructive talk emphasizing various important facts relative to dairying especially feeding and care of dairy cows.

Prof. J. B. Bain, U. S. Dairy Division, Washington, delivered an able address on "The Feeding of the Dairy Cow" emphasizing the advantages of feeding a well balanced ration and the savings made by using legume crops.

Harvey J. Martin, the only Washington County dairyman on the pro-

(Continued on Page 27.)

STYLEPLUS CLOTHES

Styleplus must be good clothes!
Our policy insures it

Our policy insures it.

Styleplus are America's known-priced clothes. The sleeve ticket, put on by us, tells the price.

Exceptional value at each known price—this is the Styleplus policy that insures your complete satisfaction.

Visit the Styleplus Store near you and notice the splendid fabrics and stylish models. Then make your selection—suit or overcoat. Or both. You will have *good* clothes—stylish clothes—clothes that will give fine service—*guaranteed*.

You want to see and try on your clothes *before* you buy them. So buy them at a *store!*

Buy plenty of clothes this fall. Prices are going up, because of market conditions.

Sold by one leading clothing-merchant in most cities and towns. Write us (Dept. AD for name of local dealer.

HENRY SONNEBORN & CO., Inc.
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President Suspenders
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They are made from light, medium or extra heavy, Shirley-woven elastic webbing—for dress, business or hard usage. Length to suit *your* height. Metal parts are brass and will not rust. Guarantee Band on each pair.

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ROYSTER'S

TRADE MARK F.S.R. REGISTERED

The Fertilizer that made Fish Scrap Famous

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Spread Manure All Winter Long

If you want to save time and money and put an end, once and for all, to the dirty, disagreeable job of old-fashioned hand methods of manuring—

If you want to utilize to the very best advantage every scrap of manure that your stock produces—

If you want the manure spreader that is built stronger, lasts longer, shreds the manure finer, and spreads it wider and more evenly—

You Want The NEW IDEA

See your dealer now and get the facts in full. Plan to make your NEW IDEA pay for itself between now and Spring. You can—easily--by spreading every week through all the winter. ***Spread right over the snow!*** Good results will be sure to follow.

The NEW IDEA is built low down; easy to load. And because of its light draft, you can heap it 30 inches high and still have a light haul for your team. There are dozens of big important, patented features that make this the best machine for your needs. For instance, note that it has no gears to break in cold weather. The chain sprocket wheel drive saves wear and gives you control, right at the seat, to spread any quantity desired—3, 6, 9, 12 or 15 loads to the acre.

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Every spot on this map represents the location of a NEW IDEA Branch or Distributor where both spreaders and repair parts are carried in stock.

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Shreveport, La.
Portland, Me.
Baltimore, Md.
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Traverse City, Mich
Minneapolis, Minn.
Kansas City, Mo.
Green Bay, Wis.
St. Louis, Mo.
Helena, Mont.
Omaha, Neb.
Fargo, N. D.
LeRoy, N. Y.
Poughkeepsie, N.Y.
Watertown, N. Y.
Columbus, Ohio
Mansfield, Ohio
Toledo, Ohio
Portland, Ore.
Milwaukee, Wis.
Greenville, Pa.
Harrisburg, Pa.
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Sioux Falls, S. D.
Knoxville, Tenn.
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Houston, Tex.
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“Has M Land Been Worthy of Its Hire?”

Have you always worked your land, or has it worked for you? Has its fertility, its power to produce, dropped steadily down, or has it held its own and perhaps even gained?

IF your land has been worthy of its hire, then pay up your debt to your soil. ***Perpetuate*** its prosperity--and yours. ***Treat it right.*** Begin now, and continue throughout the winter to spread manure direct from the stable onto your fields. For your land, drained by successive croppings, cannot possibly keep on feeding unless, in turn, it is fed.

Haphazard manuring and poor production invariably go hand in hand. Manure piles leaching away the best of their valuable plant food through a winter's wasting; wagon-tail distribution--where manure is scattered about unevenly by hand, over-feeding some portions of soil and allowing others to starve--hit-or-miss methods such as these invite scanty crops and soil starvation.

Figures have been compiled through years of accurate tests which demonstrate conclusively the wonderful value of scientific manure spreading. They cover every possible crop, climate and soil. Talk it over with your County Agent or Experiment Station Man, or consult any other authority. All will tell you that it does pay enormous returns--returns so big that their actual dollar value for one season alone is worth far more than the cost of a NEW IDEA.

NEW IDEA
Registered U.S. Pat. Off.
***The* Original Wide Spreading Spreader**
(Known as “NISCO” in the West)

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Every farmer who is interested in increasing the fertility of his soil will find these two booklets well worth having. The catalog shows you the many features that make NEW IDEA the machine you need. “Feeding The Farm” is a recognized authority on manure and the right ways to handle and spread it. It gives you many helpful ideas on improving the texture and fertility of your land.

Dealer Will Show You

SEE your dealer. Ask him for visible proof of NEW IDEA superi point out the many vitally important features that make the big choice of farmers everywhere. Talk to him today. bigger profits for you next year. If you don't know who NEW IDEA dealer is, write to us direct. We will send along with a copy of our absorbingly interesting boo The Farm.”

What Will Become of the S Our Billion Bushel Wheat Crop?

Don't Burn Your Straw

As a fertilizer alone, your straw is a ton. In addition, it is the greatest humus you can put on your soil.

Straw, spread properly, about 2 to acre, is the finest prevention agai killing of wheat, soil blow, or was keeps snow from drifting, holds mois ground and makes your soil warmer friable.

Spread your straw this fall and see how your winter grains thrive. Stack only what you need for your live stock. Don't burn your straw, and don't let it rot. Forget the absurd thought that burning is the way to control weeds. Even if it was, the price you pay is prohibitive. Either way, you rob your soil and your pocketbook—and damage the ground, for months to come, on which your straw stack stood.

NEW IDEA S ADER CO.
“Spreader Specialists” DWATER, OHIO

New Idea Straw Spreading Attachment

“Two Machines in One”

At mighty small cost you can get this attachment for your new machine or old. Handles a big load, shredding the straw fine and spreading it evenly, 8 to 10 feet wide. With this simple attachment, you almost double your spreading profits.

Few Parts

The Straw Spreading Attachment consists of two framed sides which rest on the sides of the regular spreader---an upper, or third cylinder with a chain to connect it with the upper cylinder of the manure spreader--and plates to hold the cylinder frame in place. A metal shield around the ends of the topmost cylinder prevents straw from catching in the shaft.

You Need This Machine

If you already have a NEW IDEA get a Straw Spreading Attachment and put it on--you can do it yourself in 15 minutes. And if you haven't a manure spreader, get the original wide-spreading NEW IDEA combination for spreading both straw and manure.

HOUSEHOLD

Training Little Citizens

Obedience

BY MARY E. DOZIER

The question of obedience to the laws of the home, and to the community, confronts each individual. Some pass it lightly by, giving it little thought, and less observance, but not so the thoughtful parent or teacher to whom the care of children is entrusted.

Obedienec should underly the life of each of us; it is essential to happiness. Only as we learn to listen and obey are we fitted to take our rightful place in society. We must obey the laws of nature if we would be healthy, the laws of home and community if we would be worthy members of each group, and above all, there must be obedence to the moral law.

Since obedience is such as important factor in each life, how can we best teach it to the child without destroying his individuality?

Many mothers admit their inability to obtain obedience, and teachers are often asked, "How do you make him obey, he does not mind me at all?" A dreadful confession, but since it is made, let us try to help these mothers.

First let us ssk a few questions:

1.—Do you govern your child by love or by fear?

2.—Are you honest with him?

3.—Are your demands reasonable and do you explain why you make certain requirements?

4.—Do you talk indiscretly before your child and admit your inability to control him?

5.—Do you require prompt obedience or do you tolerate disobedience and belated performance of duty?

These questions are all involved in obedience.

In dealing with children we should give the reasons for our conduct, if possible. Of course there are some things which cannot be explained and we should frankly admit it; there are others which we cannot explain to young children and we should promise to do so when they are older.

A spiritual question arose one day in a Sunday School class which was rather complex to explain to little children. The teacher left the problem and asked these questions.

"How did God make the great oak tree come out of a tiny acorn? Do you see how He did it? Did He really do it?"

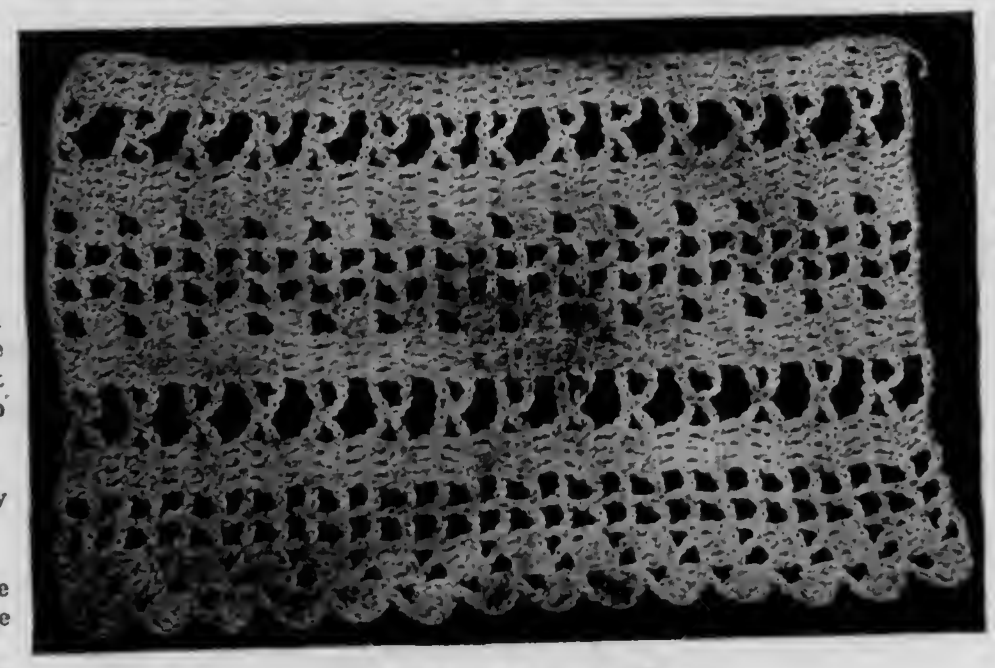
There was no doubt about the latter, for the children had often pulled up the tiny oaks and found the acorn from whch the root and tree had sprouted.

"Well," said the teacher, "there are some things we know are true, but we can't explain them, can we?"

A few Sundays later another problem arose in one of the hymns. The teacher made the best explanation possible, then added, "Some things are hard to explain, aren't they?"

Smilingly one little girl looked up and remarked, "Just like the acorn and the tree; we can't tell how God did it, but we know it is true.

In this way questioning obedience will, if properly and lovingly dealt with, become confident, trustful obedience.



Open Mesh and Lacet Edge

Obedience is subjection to rightful control at all times and in all places.

Yet many parents are satisfied with only occasional obedience. One day a mother expects immediate response to her request, while a little later she waits indefinitely for obedience. At still another time, if she is busy at some household duty or neighborly conversation, she entirely forgets her request. What happens? The child under such conditions proceeds to decide matters for himself, and his motto becomes, "With mother, obey when it is convenient." Such a child soon demoralizes the children of the whole neighborhood.

Last but perhaps of greatest concern to parents is the advice to settle with disobedience at the time; tally today's books today, unless some act requires a future opportunity for correction. Just here let us add one more word on this important subject. Study your child and his disposition; suit your corrections to him, and to the particular act in question. A certan punishment may suit one child and work ruin in the life of another.

Perhaps the thought contained in the following verses by an unknown writer may help the mother to see her life work a little more clearly:

"I took a piece of plastic clay
And idly fashioned it one day,
And as my fingers pressed it still,
It moved and yielded at my will.
I came again when days were past,
The bit of clay was hard at last,
The form I gave it still it bore,
But I could change that form no more.

2.

I took a piece of living clay,
And gently formed it day by day,
And molded with my power and art
A young child's soft and yielding heart.
I came again when days were gone;
It was a man I looked upon;
He still that early impress bore
And I could change it never more."

Aunt Peggy's Talks

In the Bible story of Mary and Martha, we find that Mary devoted all of her time to worshipping and serving the Master, while Martha, who also loved him dearly, felt her duty was to attend to the affairs of their household. Today we have examples of Mary and Martha in almost every neighborhood. One devotes all her time and energy to her household, while another gives of her self unstintingly for the good of humanity, sometimes to the extent that her family and house hold suffer as a consequence.

What we need is to have the activities well balanced and not the extreme on either hand; a blending of two characters, as it were. Of course, we must realize that women are not endorsed alike, and best so, I suppose. One may be fitted to fill one station in life, for which the other is totally unfitted. One may do her work so systematically that she allows nothing to interfere to change her plans, even to the discomfort of her family, while the other may make her family uncomfortable by the absence of system and her inability to get thru with even the ordinary routine. We have charity for both, but the ideal woman is one who can adapt herself to circumstances; one who can keep her work well in hand and yet is never so busy but what she is willing, even anxious, to help make another's pathway smoother and her neighborhood better and to make her home the "homiest" place on earth; one that her family can enjoy to the fullest extent and her children and neighbors as well will rise up and call her blessed.

One of the world's greatest needs today is for home-makers, those who can create such an atmosphere that we can feel that "hominess" as soon as we cross the threshold. Everything in such a home is for the family's comfort and is not too fine or too clean for the family to enjoy.

We all like dainty, pretty things in our homes and we can have them so and yet be serviceable. If the tired husband comes in and wants to lie on the couch and use the pillows, have them of the kind he can use and enjoy, and not be driven from piller to post to find some place to rest his weary body. Plan the whole house so it may be used, so that there will be no shut-up parlors that make you feel you are entering a morgue when you go into them. Let the sunshine and fresh air have full sway in every room and it will help reduce the doctor's visits, for where fresh air and sunshine abound, germs cannot exist. We want our children to feel when the time comes for them to leave the parental roof, that it is the dearest home on earth and they will want to come back just as soon and as often as possible.

One thought uppermost in our married life has been to have a real home—one that not only we and our children could enjoy, but our friends and our children's friends as well. We feel it has been worth while. Do not be afraid to let some things go undone that you may take an active interest in the affairs of your children and neighbors. If they want you to go for a drive, or to a picnic, or some other place, go by all means, if you refuse it may be a golden opportunity lost. It may often require some sacrifice, but the confidence and companionship of our young people are worth any sacrifice of work that we can make. Co-operation is the cry of the times; so let the young and old co-operate in both work and play, in home and in neighborhood. Thus we will have well balanced homes and consequently, well balanced neighborhood—where the golden rule is lived to its fullest extent.—Aunt Peggy.

OPEN MESH AND LACET EDGE

A pretty and effective edging is here shown that is useful for pillowcases, guest towels, chair backs, curtains, bedspreads, dresser scarfs, etc. By omitting the scallops and two open meshes at the bottom you get a neat and attractive insertion. This lace is easy to make because it does not require constant eye strain to change each row.

Directions

(Abbreviations.—Ch, chain stitch; dc, double crochet; sc, single crochet.)

Chain 49 stitches.

1st Row.—Dc 1 in fourth stitch from needle; dc 1 in next three stitches; making a group of 4 dc's; ch 3, sc 1 in third stitch of chain; ch 3, dc 1 in next third stitch of chain, thus forming a "lacet;" dc 1 in each of next three stitches, making a second 4-dc group; ch 2, dc 1 in third stitch of chain, thus making an open mesh. Now make three more open meshes the same way, then dc 1 in next three stitches of chain, making thus a third group of four dc. Now make the second lacet thus: Ch 3, sc in third stitch of chain, ch 3, dc 1 in next third stitch. This completes the lacet; then dc 1 in each of next three stitches of chain, which makes the fourth group of four-dc in this row. Now ch 2, and dc 1 in third stitch of chain, which makes a mesh; make another mesh the same way by ch 2 and dc 1 in third stitch of chain. Now dc 1 in each of next three stitches of chain, thus forming the fifth and last group of four—dc in this row; ch 2 and dc 1 in last stitch; ch 1. Turn.

2nd Row.—Dc 4 under the ch 2, which makes the scallop of the edge; ch 2 and dc 1 in top of first dc of the first group of four dc's that you now come to in Row 1 just finished. Skip two dc's, then dc 1 in the last dc of this four-dc group. Now make two open meshes thus: Ch 2, dc 1 in third stitch, ch 2, dc 1 in third stitch; then dc 1 in each of next three stitches; ch 5 and dc in the first dc of the second four-dc group of Row 1; dc 1 in each of the next six stitches, thus making seven dc in this group. Now make two meshes as previously directed (ch 2, dc in third stitch, ch 2, dc in next third stitch); dc in each of next six stitches, making thus the second group of seven dc's in this row. Now ch 5 and dc in the first dc of the last group of four—dc's of the preceding row; then dc 1 in each of next three dc's; ch 2 and turn.

To make the rest of the lace, repeat this first and second row until you have as much length as you desire.—Mrs. Edith C. Larason, Hunterdon Co., N. J.

BEANS AND MILK

Substitute For Meat and Bread

I heard some one say he doubted that beans are a perfect substitute for meat. He had good reason for his doubts because beans and milk are a good substitute for meat and bread but beans alone are not a substitute for meat.

People need food furnishing the body with proteins, the kind of substances found in meat which are body building materials.

Beans furnish some of them, but not all in a form which will efficiently do all the work of building the body, so beans must be supplemented with some other protein supplying food. The best supplement to make beans a good substitute for meat is milk. Milk and beans make an excellent substitute for bread and meat. The reason for saying "bread and meat" is that beans have in them much fuel material for the body in the form of starch, which is a cheap fuel. Bread, too, has starch in it, but meat has not, hence beans when supplemented by milk do more than meat alone. They do for the body, wheat bread and meat, or potatoes and meat can do. They furnish both building material and a cheap fuel. Milk may be served with beans in the followng ways:

It may be served at the same meal as a beverage or in some dish like a custard or creamed vegetable. Or it may be combined with the beans as in bean soup made of mashed, boiled beans and hot milk thickened with a little flour, and seasoned with butter, pepper and salt.—Edith Allen.

PUTTING THE NERVOUS CHILD TO BED

There can not be one rigid rule for handling or training all children. Hearty strong ones can be trained by one method, which if applied to nervous children would completely ruin them.

Most mothers nowadays object to rocking their babies to sleep, and it is not a good plan to thus indulge the well, sturdy child, but there is something restful and soothing in the motion of a rocker. Wrap a warm blanket about the feet of the sick, nervous child, and rock is gently. And if the mother will sing a low melody, this will do wonders toward quieting the child. Some children of this type will relax if a doll, one they love, is placed in their arms.

Another good plan is to talk quietly to the child, no matter how tired or cross you may feel; it pays to control yourself. After making the little one comfortable, tell her story; not an exciting one, but one of birds, little chickens or lambs, or "when mother was a little girl." After a few nights like this, the child will listen to reason, and will require less of the mother's time.—Mrs. R. S. Brent, Northumberland Co., Va.

CURE BEEF AT HOME

Many farmers cure pork enough to supply the family needs but very few attempt to cure beef. Any brine or dry mixture which gives good results in curing pork can be used satisfactorily for beef, but since beef is leaner than pork, it should not be allowed to remain in the brine or mixture quite so long or it will become hard and salty.

Dried beef should have the same cure as corned beef, but it should not be allowed to become too salty. It should be washed to remove the excess of the cure, and smoked, if the smoke flavor is desired. A very good country practice is to dry-cure the beef with salt and brown sugar, using about a fifth as much sugar as salt, rubbing the meat very thoroly with the "cure" every two or three days for about two weeks. It should then be washed, wiped and hung up in a warm place to dry, or transferred to the smoke house and given a light smoke.

Corned beef is at its very best when it has been in the cure about 10 days. If kept in the cure more than a month, it needs considerable freshening before cooking. If the red color of the beef is to be preserved, use a small amount of saltpeter, not more than 2 ounces to each 100 pounds of the meat. This improves the color of the meat, but is detrimental in that it tends to harden the fibers.—Leonard F. Strickler.

PEANUT BUTTER AND HONEY SANDWICH

Did you ever eat a peanut butter and honey sandwich? If you never did, just try this one:

Spread buttered bread first with a layer of peanut butter, then with a layer of strained honey. The honey does away with the tendency that peanut butter has to stick to the roof of the mouth. And it also adds pleasurably to the flavor of the sandwich. These sandwiches will be popular in the children's lunch boxes for school days.

Another good sandwich is made by spreading slices of brown bread with a mixture of cottage cheese and chopped olives.—Mrs. Lillian B. Arthur, Penna.

ORIGIN OF PEPPERMINT INDUSTRY

The growing of peppermint, once an industry of considerable importance in western New York and now carried on to some extent in Michigan and northern Indiana, had its beginning back among the hills of Franklin County, Mass., in the year 1814.

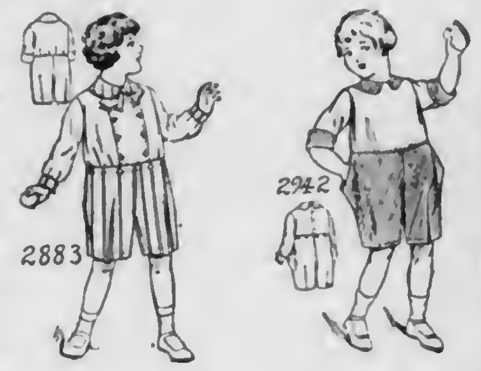
That year Nahum Burnett, a New England yankee, who owned a few stony acres in the old Bay state, experimented with peppermint that grew along the bank of a small stream. He distilled some oil by boiling the plants in a wash boiler, and sold it at a price that proved to be very profitable. This venture gave him the idea of cultivating peppermint as a farm crop. It is related that in one season he sold 1400 lbs. of oil for $4,300, an income which made him a plutocrat in the eyes of his neighbors of those early days.

Nahum's brother, Archibald Burnett, carried a bag of peppermint roots from this Massachusetts farm to Wayne County in Western New York, where he planted them, and erected a small distillery. Other farmers, attracted by his success, engaged in the business, and for several years Wayne County was the chief source of the world's supply of peppermint oil.—E. E. R.

PENNSYLVANIA FARMER PATTERNS

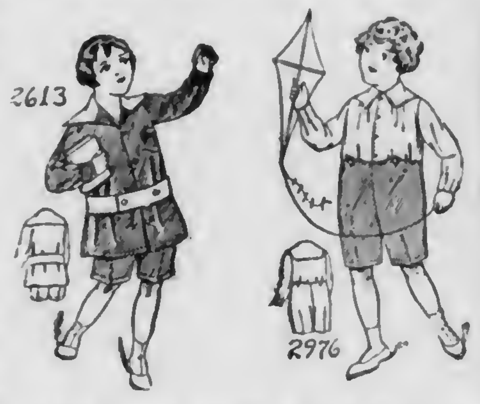
Give figures and letters of each pattern exactly as printed at beginning of each description or we will not be responsible for correct filling of orders. Give bust measure when ordering waist patterns, waist measure for skirt, and age for children's patterns. Address Pennsylvania Farmer, 261 S. Third Street, Philadelphia, Pa.

2883.—As here shown, striped and plain galatea were combined. Serge, corduroy or khaki could be used for the trousers, and cambric, percale or gingham for the blouse. The pattern is cut in 5 sizes: 2, 3, 4, 5 and 6 years. Size 4 requires 2⅛ yards of 44-inch material. Pattern, 10 cents.



2942.—The small boy will be pleased with this garment, which is comfortable and has roomy pockets. The sleeve may be in wrist or elbow length. The style is good for development in gingham, seersucker, khaki, drill or linen. The pattern is cut in 4 sizes: 2, 3, 4 and 5 years. Size 4 requires 1⅜ yard of 27-inch material. Pattern costs 10 cents.

2613.—This model is good for serge, gabardine, velveteeen, corduroy, galatea, khaki, cheviot and flannel. The belt and collar may be of contrasting material. The pattern is cut in 4 sizes: 2, 3, 4 and 5 years. Size 4 requires 3⅝ yards of 27-inch material. Pattern, 10 cts.



2976.—The blouse of this suit may be of cambric, Indian head, drill, linen, percale or madras, and the trousers of khaki, serge, flannel, corduroy or cheviot; or the entire suit may be of one kind of material. The trousers are finished with an inside waistband, which is buttoned to the band of the blouse; additional closing is effected by buttons sewed to the shaped part of the trousers. This pattern is cut in 4 sizes: 3, 4, 5 and 6 years. Size 4 requires 2¼ yards of 44-inch material. Pattern, 10 cents.

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Boys, Look Here!

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The knife is good size, 3¾ in. Highest grade English crucible steel blades, sharpened and whetted on an oilstone by hand. Two blades: 1 large spear point and 1 pen; half polished silver bolsters, brass lining.

In order to avoid errors print your name and address. Allow about 2 weeks for knife to reach you.

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261 South Third Street, Philadelphia, Pa.

Farm Products Prices and Prospects

PENNSYLVANIA CROPS

Secretary of Agriculture, Fred. Rasmussen, reports crop yields and conditions in Pennsylvania, as collected and compiled by the Bureau of Statistics, as follows:

Wheat.—The average yield of wheat is estimated at 17.7 bushels as compared with 18.3 bushels last year and a ten-year average of 18.1 bushels per acre. The total production is estimated at 28,011,000 as compared with 26,023,600 bushels last year. The increase in acreage accounts for the difference in the total. Conditions for wheat were ideal and a record crop was expected until May when excessive rains prevented proper fertilization. Then, insect pests and plants diseases, together with storms before harvest and while the grain was in shock, blasted the hopes of the Pennsylvania farmers. Last year conditions improved as harvest approached and this year it was the reverse. The quality of wheat is estimated at 91 percent compared with 103 percent one year ago.

Rye.—It appears that the yield of rye is 17.0 bushels per acre. The average yield last year was 17.5 bushels and the ten-year average is 17.4 bushels per acre. The total production amounts to 4,736,800 bushels as against 4,676,500 bushels last year.

Oats.—The average yield of oats is 29.6 bushels per acre, making a total production of 33,546,500 bushels. Last year's yield was 39 bushels per acre, and the total production 44,103,000 bushels. The ten-year average is 32.6 bushels per acre. Quality of oats this year is 89 percent.

Barley.—The average yield of barley is estimated at 24.9 bushels per acre and the total production 348,600 bushels.

Corn.—Present indications are that the average yield of corn will reach 47 bushels per acre, and, considering the large acreage, the total production will approximate 74,176,000 bushels. This is the largest corn crop ever produced in Pennsylvania. Weather conditions were very favorable during the growing season, and the crop matured without damage by frost.

Buckwheat.—The condition of buckwheat is 92 percent, and is indicative of a yield of 21.0 bushels per acre. On this basis the total production will approximate 6,652,000 bushels. Last year's crop was estimated at 6,191,600 bushels.

Potatoes.—The condition of potatoes on October 1 is 80 percent and forecasts an average yield of 94 bushels per acre and a total production of 26,863,000 bushels. The average yield last year was 83.5 bushels per acre and the total production 24,733,000 bushels. The late potatoes are a better yield than the early ones. Considerable rot has been reported, more particularly in the northern part of the state, due to blight and wet weather.

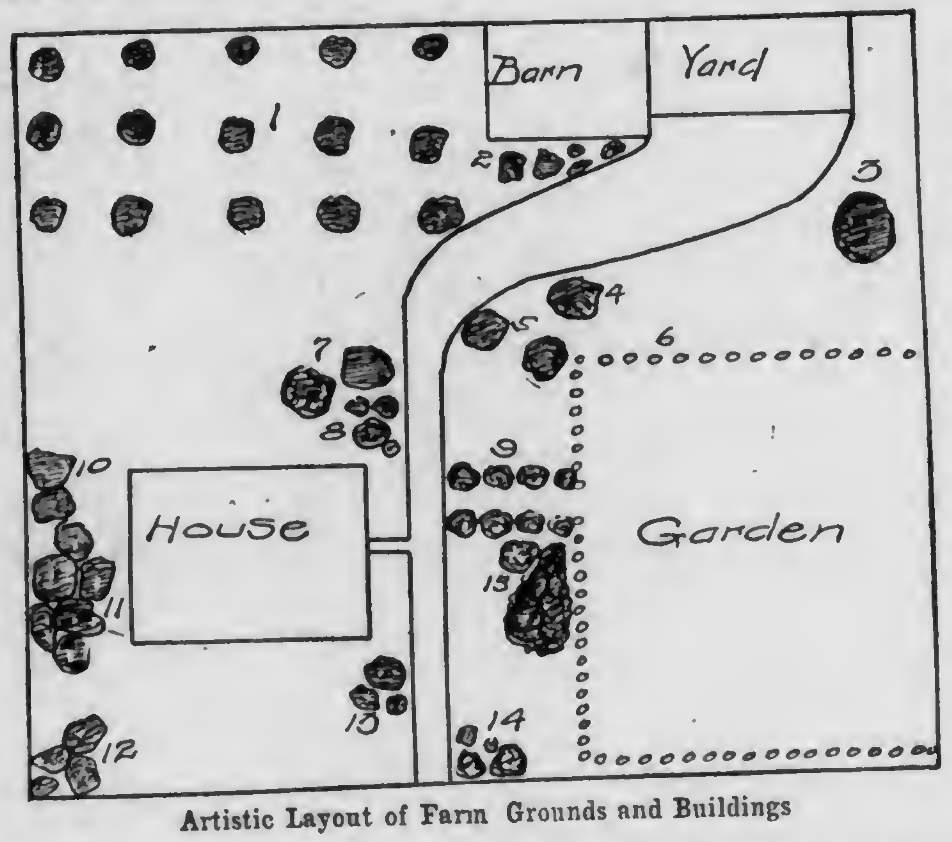
COMMUNITY FORESTS

Municipally owned forests have long been a feature of old world community activities. In several of the German states the municipal forests have long been a source of revenue to the cities, in some instances meeting the entire expense of running the local government.

The county improvement of Oswego County, New York, is planning to make a practical application of this idea in developing community forests in that county, whose primeval forests long ago sheltered the red men of Cooper's "Leatherstocking Tales," and thru whose solitudes ranged the wild deer pursued by the Hawkeyes of pioneer days. The association is organizing a system of county and township forests, on the basis of a forest survey made by the New York State College of Forestry at Syracuse. Each of the twenty-four townships in the county is to plant a forest of 100 acres as a beginning, these forests to be part of a county system, to be made accessible from all parts of the county by connecting highways.

The work of planting the township forests will be directed by trained foresters from the state forestry college; but the townships will buy the land and operate the forests. It is planned to plant at least four township forests next spring, and increase the number of planting orders in the fall until all the townships will be growing trees.

Other counties will undoubtedly join this township forest movement, and ere many years thousands of acres of now unproductive land in New York state will be growing trees, which in time will develop into valuable timber.—E. E. R.



Artistic Layout of Farm Grounds and Buildings

GOOD AND BAD FEEDSTUFFS

Chairman Haugen of the House Committee on Agriculture has prepared and introduced a bill to protect purchasers of animal feeding stuffs from worthless or near-worthless feed ingredients. The National Grange believes that this legislation should take its place in importance beside pure food legislation, the control of patent medicines, and the often discussed pure fabric law.

The Haugen bill provides for the plain statement on the tag or label on all feeds sold in inter-state commerce of the ingredients which are mixed to form the feed, their common names, and definite quantities. Many states have feed laws in which the names of the ingredients and the amounts of the nutrients most be put on the tag, but without the statemen of the amount of each ingredient. This is the chief, altho not the only point aimed at in the Haugen bill. The idea is that if a feed contains oat hulls, barley hulls, corn cob, peat, coffee huls, ground hay or straw, chaff, sorghum pulp, flax plant refuse, or cotton seed hulls, the amount of these ingredients used should be stated in pounds or in percentage on the tag in plain type, and by their proper names. Perhaps the feeder wants to buy them, and certainly the seller wants to sell them, else they would not be there. But if so, let it be on their merits, not under some fancy name, and hidden by a few pounds of molasses. Chairman Haugen has not yet been able to advance his bill in Committee or in the House. If farmers and farmers' organizations will begin to ask their Congressmen about it and write to Chairman Haugen urging action at this session of Congress the bill can be hastened. It is good legislation.

THE SEASON IN PENNSYLVANIA

The acreage of barley in Pennsylvania was small, but the crop was generally good. The season was especially favorable for corn and it is good in all parts of the State.

Reports indicate that it is the best crop that has been raised for many years. It was a poor year for most orchard fruits. Late freezing temperatures in the spring killed all of the fruit in some of the western counties, and for the central and western portions of the state as a whole the yield of orchard fruits was generally light. In some of the eastern and southeastern counties the returns were better, and a few localities reported about normal yields. For the State as a whole the yield of peaches and apples was but little more than half of the normal, while pears were very poor. The yield of oats was much below the normal and the quality was only fair. Early potatoes were only fair as a rule, but the late fields were much better, and the total yield for the State promises to be fully up to the average. Rye was about an average crop, but some was lost by reason of heavy rains in the southeastern counties while the grain was in the shock. Spring wheat was fair to good, but there was very little outside of five or six northern counties.

Early gardens did not come up to expectations, and the early tomato crop was very light. Late gardens and truck crops were generally good. Celery and cabbages promise the best returns for several years. Winter wheat promised much during the first part of the season, but it did not fill well, and later a large portion of the crop was damaged or ruined by heavy rains.

HARRISBURG FOOD SURVEY

The study of the distribution of perishable food products in the City of Harrisburg which is being conducted by the Bureau of Markets of the Pennsylvania Department of Agriculture is receiving splendid cooperation from all parties concerned. The producers, consumers, city officials, members of the trade and others are fairly flooding the office of the Bureau of Markets with communicatons regarding the market situation. Further information is being obtained by personal interviews. There can be no doubt that there is a large number of people in and around Harrisburg vitally interested in these matters.

The purpose of the Bureau of Markets is simply to accumulate information on all sides of this question which shall be reliable and complete and which should be of assistance in arriving at a fair understanding of the situation.

CHINA DISCOVERS AMERICA

Truly representative American news is being distributed in China for the first time in the history of the country. Heretofore, the only American European news received in China was distributed by Reuters or by the German Agency Ostasiasche Lloyd or by the Japanese Agency Kokusai. In spite of the fact that American news have been made available, the news printed in the Far East have been largely limited to reports of crime and corruption.

During the early months of the war the Committee on Public Information established an American news agency which, tho the Chinese people have been led to misunderstand us, leaped into instant popularity. After the armistice, when Government funds were no longer available, American business men founded a corporation to maintain the American news agency with private capital. This organization intends to carry out advertising campaigns, to translate and publish American books, collect crop reports and to distribute American seeds to Chinese farmers.

Lots of land and big muscles will pay, but less land and plenty of active brains may pay better.

Lime is not a fertilizer, but its presence in the soil affects other properties that induce plant growth.

PASSING EVENTS IN PICTURES

(Photo, Copyright by Underwood & Underwood)

1.—Soldiers' Monument Unveiled at White Plains, N. Y.

2.—Cleaning Elephant With Vacuum Cleaner at Central Park, New York City.

3.—Wife of Senator Frelinghuysen Launches Steamer, "American Legion."

4.—Mounted Machine Gun Ready For Action at Gary, Indiana, Center of Steel Strike.

5.—Labor and Capital Sit Down Together—Sec'y Morrison of A. F. of L., and J. D. Rockefeller, Jr.

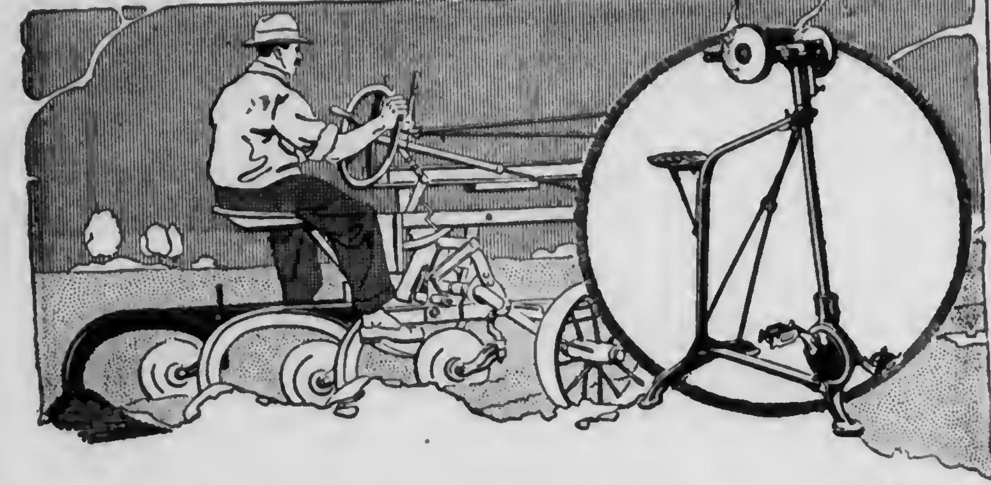
6.—Wife of Gov. Smith Unveils Soldiers' Monument. (See No. 1.)

7.—Major Abbot, Chief of the U. S. Capitol Police, Washington, D. C.

8.—Mrs. D. A. Campbell, Originator of the "Hour of Song" Idea for November 11.

9.—Mike Gilhooley, a 5-Times Stowaway Across the Atlantic, Adopted at Last by American Lady.

10.—Miss Hannah Patterson, Assistant to Secretary of War Baker.



Then You Can Add Another Bottom

The same power that pulls a gang-plow of two dull bottoms will just as readily pull *three* well-sharpened bottoms. This has been proved at many of the U. S. experiment farms.

A sharp plow cuts the soil with little resistance, speeds up the job and saves time, power and profit for the farmer. Sharpening plow-points is a simple, one-man job when you have a

Pedals like a bicycle. No pressure required—no water or oil to cool the steel. The head swivels, making the most awkward tool easy to grind.

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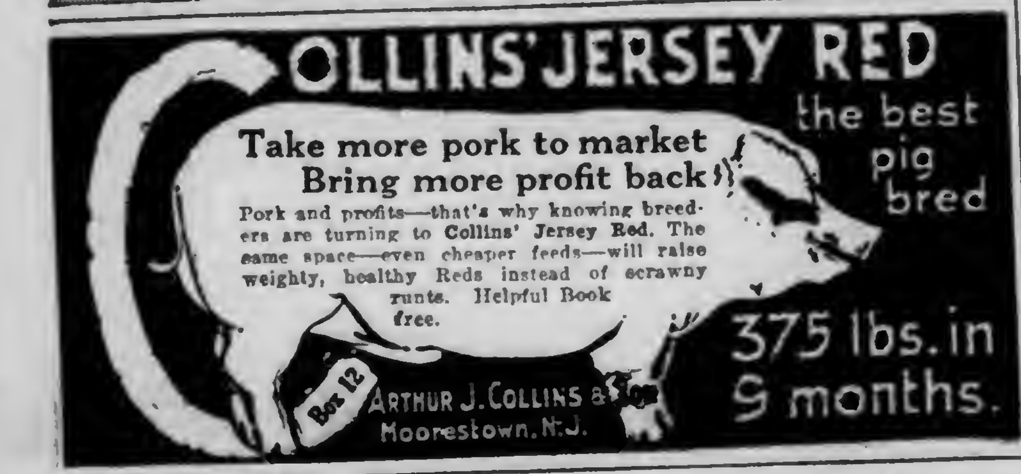

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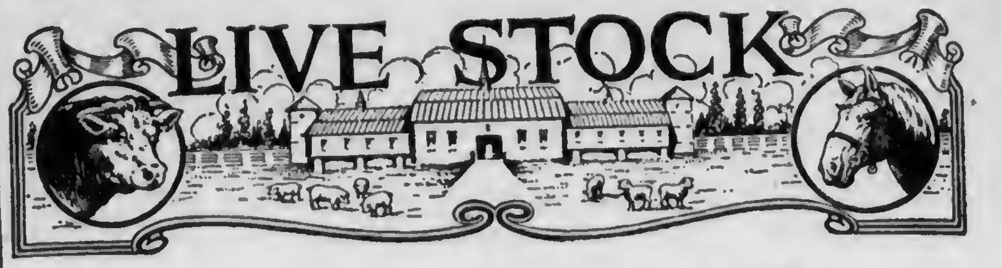

Characteristics of Poland Chinas

The Poland-China hog is a native of the Miami Valley of Ohio. In size it ranks with the leading breeds of swine common on our corn belt farms, tho somewhat finer and more compact than the Berkshire and Chester White. Years ago Poland-Chinas were freely marked with white, but the majority of present day breeders prefer animals with white feet, white switch and a dash of white in the face. Small white markings on other parts of the body are not seriously objected to. The face is only slightly dished, and the jowl is full and heavy. The ears are fine and firmly attached, the tip inclining to droop at about one-third of the distance from the end. Ears that are coarse and inclined to droop nearer to the point of attachment do not find favor among experienced breeders. The shoulders are massive, and the side is somewhat short and very deep. The back is broad and slightly arched. The hams are very wide and deep and the legs short and rather inclined to be too fine.

The exact origin and different breeds of swine used in developing the Poland-China hog are not altogether clear. One can rarely quote breed historians without stirring up a wave of protest from various partisians. The Berkshire breed is said to have played an important part in the development of the modern Poland-China, but it is claimed by many breeders that no outside blood has been infused into the breed since 1845. At the National Swine Breeders' Convention held in Indianapolis in 1872 it was recommended and accepted that the name Poland-China should be recognized. It is useless to discuss the question further than to say that the breed possesses great merit and has become exceedingly popular in all localities where hog-growing is a leading industry.

Years ago the Poland-China was a large rangy hog capable of attaining extremely heavy weights, but the demand for a more compact, early maturing type caused many breeders to go to the opposite extreme, which in many cases has resulted in too light bone, small size and decreased prolificacy, at the present time, however, the most successful breeders have succeeded in maintaining the early-maturing qualities, and at the same time developing more size, stronger bone and increased prolificacy among the sows. There is no doubt that success in promoting the general popularity of the breed depends upon breeding along such lines.

The Poland-China hog has been developed to meet the demands for a quick-growing fat hog, as to feeding qualities and the ability to be fattened at any desired age no breed excels it. The fact that it has been developed upon corn- feeding and probably will stand corn feeding better than some of the other breeds has caused it to become popular even tho the carcass carries a rather large proportion of fat to lean meat. Owing to its wonderful tendency to take on fat, the Poland-China is useful for crossing with breeds which lack this tendency.

The following scale of points has been adopted by the National Association of Expert Judges of Swine; Head 4, eyes 2, ears 2, neck 2, jowl 2, shoulders 6,, chest 12, back and loin 14, sides and ribs 10, belly and plank 4, ham and rump 10, feet and legs 10, tail 1, coat 3, color 3, size 5, action and style 3, condition 2, disposition 2, symmetry of points 3. These are the points commonly used in judging Poland-China hogs, and will serve as a safe guide in studying the comparative value of these points in selecting breeding animals.

"THE PILOT"
Grand Champion Poland China Boar at National Swine Show

"MISS BOB WONDER"
Grand Champion Poland China Sow at National Swine Show

REPLENISHING THE EWE FLOCK

In many sections of the state the most practical method of increasing the size of the farm flock is thru retention of ewe lambs. The future value of the breeding ewe flock will depend largely upon the judgment exercised at this time. Proper selection is based upon a knowledge of the fundamental qualities making up a profitable breeding ewe.

In flock husbandry today, mutton is the main consideration with wool as an important by-product. On most farms the nearer lamb production approaches a milk-and-grass production the more profitable will be the results; therefore a breeding ewe should possess size, constitution, good wool covering, prolificacy and milking qualities.

The lamb represents the larger portion of the income from a ewe. Consequently the ability to produce and deliver a robust lamb is essential. This is indicated by a wide conformation thruout, plenty of length, strength of back, and a roomy middle. She must have many of the good qualities of a good dairy cow.

All female breeding stock should show feminity, or a lack of coarseness, but never to the degree of delicacy. In selecting the ewe lambs for future breeding one should bear in mind the conformaton and type of lamb that is popular on the market, such as a good development in the region of valuable cuts.

Wool is now an important consideration and will continue to be so. At present the finer wools are at a premium. A few years ago the medium wools were at the top. The safe policy for the sheepman is to go straight ahead with the type of wool now being produced with whatever modifications seem practical. A good utility farm ewe should shear ten pounds of merchantable wool. Ewe lambs possessing more or less Merino blood will grow into heavier shearing ewes than lambs without it.

Aside from the grade, the value of wool is determined by its condition and quantity. The wool covering should be well extended over the under side of the body and the extremities, and should be uniform in character.

FEWER HORSES IN CITIES. LESS DEMAND FOR HAY

While everyone has observed the rapid decrease in the number of horses used for draft purposes in the cities and the still more rapid decrease in driving horses the actual extent of the change and the effect that it has had on the agriculture of the state have not been fully realized. In 1910 according to the U. S. Census there were 128,000,000 horses in New York City; by 1917 the number had decreased to 108,000 and according to the recent stable census of the Board of Health there are now only 76,000 horses, a decrease of nearly 30 percent in the last two years. While the number of horses on the farms has changed but little, the number in the cities and towns of the state is probably a 100,000 less than it was ten years ago, and in consequence, the demand for market hay in this state alone has decreased by a third of a million tons. This furnishes a partial explanation for the fact that the acreage of hay in New York state is now about 400,000 acres less than the average 10 years ago. Hay is now relatively cheap in proportion to the price of other farm products and horses are selling for little more than half of what it costs to raise them. They are cheaper than they were five years ago. The increase of automobiles and trucks has been so rapid of late that farmers have not been able to adjust their methods to the changed conditions.

SWEET CLOVER A PORK MAKER

Sweet clover has proved to be an excellent pasture crop for hogs. It usually is seeded alone and pastured for two seasons. The hogs may be turned on the fields as soon as the plants have made a 6-inch growth. From this time until late fall an abundance of forage is produced as pasturing induces the plants to send out many tender, succulent branches. Pasturing the second season may begin as soon as the growth starts in the spring. If the field is not closely grazed the second season it is advisable to clip it occasionally, leaving an 8-inch stubble, so as to produce a more succulent growth.—Leonard F. Strickler.

In South Dakota they say that the state's hens in 1917 added as much to the wealth of the state as all the vegetables, fruits, honey, flax and rye combined. Credit one to the woman, for the farm flock is often the housewife's charge.

Get The Best

ASK the driver of an automobile stage running to the deer country what is his choice in a rifle and ammunition. If he hunts, he is almost sure to say Remington UMC. No one is better able to appreciate the best.

Modern minded, well informed sportsmen the world over have come to depend upon Remington UMC for the most important improvements in their shooting equipment. No other manufacturer so completely justifies this confidence with modern service.

In hunting rifles, the highest efficiency is reached in the Remington UMC lock-breech autoloading and slide action repeaters—hammerless, side ejecting and fitted with safety lock. In cartridges, in the Remington UMC rimless high power .25 .30, .32 and .35 for these rifles.

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This is the Original National Giant Smoke House
Beware of Imitations and Experimental

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Don't sell all your hogs and pay big butcher bills. Save enough for your own use and smoke hams, bacon, sausages and fish in the National Giant Smoke House. This wonderful smoke house is portable. Can be operated in and out-doors. Runs on sawdust, cobs and little bark for seasoning. The

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Write for our *free* book, "Natco on the farm."
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Section showing foundation
Our building plans may help you—free while they last
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Natco Hog House, L. R. Sabine, Gaithersburg, Md., owner

KEZIAH COFFIN

By JOSEPH C. LINCOLN

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SYNOPSIS

Keziah Coffin, a good-natured widow, is packing up to leave the fishing village to go to Boston, her brother having died and left her alone. Grace Von Horne, ward of Eben Hammond and young friend of Keziah, is assisting her. They are discussing the coming of the new minister for the "Regular" Church, to which denomination Keziah belongs. Grace is a member of the "Come-Outers," a rival set. Between the two a jealous rivalry exists. Eben Hammond calls and induces Keziah to become housekeeper for the new and single minister. She accepts and Grace goes with her to prepare the house for his coming. The new minister arrives and he and Keziah become friends at once. Keziah proceeds to make him acquainted with local conditions—especially the strained relations between the two sects. Mrs. Coffin advises him that if he wishes to steer an easy course he must recognize the "classes" of the community, and also not to fraternize with the "Come-Outers." In spite of the warning he visits the "Come-Outer" meeting one evening, is recognized and is preached at and prayed for. Grace Van Horne and the Minister meet after the meeting in a rainstorm and he sees her home. The "Packet" arrives in port, bearing Nat, the girlhood lover of Keziah.

"Yes, he did. I rather guess Zeb Mayo or somebody may have suggested it to him first, but——"

"Humph! I rather guess so, too."

"Well, you can't always tell. Sometimes when you really get inside of a person you find a generous streak that——"

"Not in a Daniels. Anybody that got inside of Elkanah would find nothin' but Elkanah there, and 'twould be crowded at that. So he's talkin' to the new parson, hey? Bossin' him, too, I'll bet."

"I ain't so sure. Mr. Ellery's young, but he's got a mind of his own."

Captain Hammond chuckled and slapped his knee.

"Ho, ho!" he laughed. "I've been hearin' somethin' about that mind. Went to the chapel last night, I understand, and he and dad had a set-to. Oh, I heard about it! Wish I might have been there."

"How does your father act about it?"

"'Bout the way a red-hot stove acts when you spill water on it; every time he thinks of the minister he sizzles. Ho, ho! I do wish I could have been there."

"What does Grace say?"

"Oh, she doesn't say much. I wouldn't wonder if she felt the way I do, tho we both keep quiet. I'll tell you between ourselves and the ship's pump, that I sort of glory in the young chap's spunk."

"Good! So do I. I like him."

"See here, Keziah! I'm gettin' frightened. You ain't settin' your cap to be a parson's wife, are you? Because——"

"Don't be sily. I might adopt him, but that's all, I guess."

Her friend leaned forward.

"Keziah," he said earnestly, "there's no sense in your slavin' yourself to death here. I can think of a good deal plasanter berth than that. Pleasanter for me, anyhow, and I'd do my best to make it pleasant for you. You're only got to say the word and—No? Well, then all I can do is hope thru another voyage."

"Please don't, Nat. You know."

"No, I don't know."

"Well, perhaps you don't. But I know. I like you, Nat. I count on you as the straightest, truest friend I've got; and I want to keep on countin' on you just that way. Mayn't I?"

"'Course you can, Keziah. But ——"

"Then don't say another word, please."

He sighed and looked out at the open door. The kitchen clock ticked loud in the silence.

"All right," he said at last. "All right, but I'm goin' to keep on hopin'."

"You mustnt, Nat."

"Keziah, when you set your foot down you're pretty stubborn; but I've got somethn' of a foot myself. You remember you said so a few minutes ago. Hi, hum! Well, speakin' of dad reminds me that I'm kind of worried about him."

"You are? Why? Isn't he well?

"Pretty well, but he ain't strong, and he gets too excited over things like last night's foolishness. Grace tells me that the doctor says he must be careful or he'll drop off sudden some of these days. He had a shock five or six years ago, a little one, and I've been anxious about him ever since. I've got to go to New York off and on for the next month; after that I hope to be home for a spell and I can keep an eye on him. Keziah, if you'll listen I'll whisper somethin' to you—religion's a good thing and so's a mustard plaster, but both of 'em can be put on too strong. Dad is just a little mite crazy on Come-Outers, I'm afraid."

"Oh, no, I guess not! You mustn't worry. How did Grace look to you?"

"Like the harbor light on a stormy night. She's a brick, that girl, and gets prettier every minute. Wonder to me some of the young chaps down here don't carry her off by main strength. She'll make somebody a good wife."

"Um-hm. Have—have you ever thought of her that way yourself?"

"Keziah!"

"Well, don't get mad. I think a lot of Grace, and I don't know anyone I'd rather see you marry."

"I do. Keziah, that's enough of that. Are you and dad in partnership to get me spliced and out of the way? He was at me this mornin' along the same line. Don't say anything like that again, even in fun. You know why."

"All right, all right. Now tell me about yourself. Have you had a good voyage? How do you like your owners? How did Zach Foster ever get the packet in thru yesterday's fog?"

"Voyage was all right. Some rugged weather on the trip out, but homeward bound we slid along like a slush bucket on a greased plank. Owners are all right. Good people as ever I sailed for. As for Zach and the packet——Ho, ho!"

He laughed, rocking back and forth on the chair, which creaked in sympathy.

"What's the joke?" demanded the housekeeper. "Don't do that! That chair wasn't made for elephants to use."

"Hey? 'Tis pretty weak in the knees, ain't it? Dad would say 'twas a piece with the creed of those that owned it. I — What's that? Somebody's comin'. I'm going to clear out. I don't want to be put thru my catechism yet a while."

"No, you mustn't go. I want you to meet Mr. Ellery. You sit out on the wash bench by the back door till I get rid of whoever 'tis that's comin'. Scoot!"

Nat "'scooted,' stoppng to snatch up his hat as he ran. Keziah went into the dining room and admitted Captain Zebedee Mayo, who was panting from the exertion of his walk.

"Whew!" puffed Captain Zeb, mopping his forehead. "How be you, Keziah? What? You ain't all alone! Thought you'd have a cabin full of gab machines by this time. Have they been and gone?"

"No, they haven't been. I— My land, my pie!"

She rushed into the kitchen and snatched the pastry from the oven. Her new caller followed her.

"So they ain't been, hey?" he said. "That's queer."

"Elkanah's here. He's in there with the minister now."

"He is? Givin' the young feller Hall Columby, I cal'late. Well, now, he shan't. He, he! When they told me how the minister passed old hop-and-go-fetch-it what was due him at the chapel last night I riz up and hoorayed till my wife shut the windows. She said the neighbors all thought I was loony, anyhow, and I needn't prove it to 'em. He, he! But Elkanah ain't got any funny bone. He's as solemn as a stuffed owl, and he'll— Well, I'm goin' to put my oar in. I'm parish committee, too, I cal'late, and I've got somethin' to say, even if I wa'n't christened Daniels. Here goes!"

He headed for the study, but before he crossed the threshold of the kitchen Ellery and his visitor came out into the dining room. Captain Elkanah's face was flushed, and he fidgeted. The minister looked determined but calm.

"Ahoy there, Elkanah!" hailed Zebedee cheerfully. "'Mornin', Mr. Ellery. Been havin' officers' counsel, have you?"

"Good morning, Captain Mayo," said the minister.

"'Mornin', Zebedee," grunted Elkanah. "I have—hum—ha!—been discuessing the regrettable affair of last night with Mr. Ellery. I have tried—hum—ha! to show him that respectable people of our society don't associate with Come-Outers, and that for a Regular minister to go to their meetings is something neither the congregation nor the parish committee approves of. No—er—hum—ha! no!"

"And I explained to Captain Daniels," observed the minister, "that I went there for what seemed to me good reasons, and, as they did seem to me good at the time, I'm not ashamed of having gone. It was an honest mistake on my part and I may make more."

"But the society—" began Elkanah. Captain Zez interrupted him.

"Don't worry about the society, Mr. Ellery," he said with emphasis. "Nor about the parish committee, either. Great fishhooks! the most of us are tickled to death over what you said to Eben Hammond. We think it's a mighty good joke. You didn't know, of course, and what you did was done innocent. He! he! he! Did you lay him out, hey?"

"Zebedee," began Captain Daniels, "I must say I can't see anything to laugh at."

"You never could, Elkanah. I remember that time when you and me and some of the fellers home from sea went out sailin' and the boom knocked you overboard with your Sunday clothes on. Lordy, how the rest of us did holler! but you never cracked a smile. If you'd seen yourself when we hauled you in! whiskers runnin' salt water; beaver hat lookin' like a drownded kitten——"

"There! There! Never mind that. I think you'll find a good many of the society feel as I do, shocked and —hum—ha!—sorry. I'm surprised they haven't been here to say so."

"I expected them," remarked the minister.

"So did I," chimed in Captain Zeb. "But I cal'late to know why they ain't been. They're all too busy crowin' over the way Nat Hammond fetched the packet home last night. What? You ain't heard? Great fishhooks! t's the best thing ever——"

"I've heard about it," snapped Elkanah impatiently. "Mr. Ellery, I'm glad you realize that your action was a mistake and I will take pains to have that immejitly made plain to ——"

"You ain't heard, Keziah, have you?" broke in Zebedee. "Nor you, Mr. Ellery? Well, I must tell you. Here's where I gain a lap on Didama Rogers. Seems the Deborah S.——that's the packet's name, Mr. Ellery—she hauled out of Boston night afore last on the ebb, with a fair wind and sky clear as a bell. But they hadn't much more'n got outside of Minot's 'fore the fog shut down, thicker'n gruel for a sick rich man. The wind held till 'long toward mornin'; then she flattened to a dead calm. 'Bije Perry, the mate, he spun the yarn to me, and he said 'twas thick and flat as ever he see and kept gettin' no better fast.

"They drifted along till noon time and then they was somewheres out in the bay, but that's about all you could say. Zach, he was stewin' and sputterin' like a pair of fried eels, and Lafayette Gage and Emulous Peters—they're Denboro folks, Mr. Ellery, and about sixteen p'ints t'other side of no account—they was the only passengers aboard except Nat Hammond, and they put in their time playin' high low jack in the cabin. The lookout was for'ard tootin' a tin horn and his bellerin' was the most excitin' thing goin' on. After dinner—corned beef and cabbage—trust Zach for that, though it's next door to cannibalism to put cabbage in his mouth—after dinner all hands was on deck when Nat says: 'Hush!' he says. 'Don't I hear somethn'?'

"They listened, and then they all heard it—all 'cept Zach, who's deef in his larboard ear.

"'Stand by!' roars Nat. 'It's a squall, dead astern and comin' abilin'! I'll take her, 'Bije. You look out for them tops'ls.'

"So Nat grabs the wheel and 'Bije tears for'ard and sends the two fo' mast hands aloft on the jump. Zach was skipper, but all he done was race around and holler and trip over his own feet. Oh, he's a prize sailor, he is! Don't talk to me about them Fosters! I——"

"Nobody is talkin' about 'em but you Zeb," observed Keziah dryly. "Go on. How about the squall?"

"It hit 'em 'fore they got even one tops'l clewed down. That one, the foretops'l 'twas, split to rags. The main tops'l was set, and when the squall struck, the rotten old topmast went by the board 'Kerrash-o!' 'Course splinters flew like all possessed, and one of 'em, about a foot long, sailed past Nat's head, where he stood heavin' his whole weight on the wheel, and lit right on the binnacle, smashin' it to matches.

"They say Nat never paid the least attention, no more'n if the chunk of wood had been a June bug buzzin' past. He just held that wheel hard down and that saved the packet. She come around and put her nose dead in the wind just in time. As 'twas, 'Bije says there was a second when the water by her lee rail looked right underneath him as he hung onto the deck with finger nails and teeth.

"Well, there they was, afloat, but with their upper riggin' gone and the compass smashed flat. A howlin' no'thwester blowin' and fog thick as ever. Zach was a whimperin', fidgetin' old woman, Lafayette and Emulous was prayin' in the scuppers —and that ain't an exercise they're used to, neither—and ever 'Bije was mighty shook up and worried — he says he was himself. But Nat Hammond was as cool and refreshin' as the bottom of my well up home.

"'Better clear away the mess aloft, hadn't you?' he says to the skipper.

"Zach said he guessed so; he wa'n't sure of nothin'. However, they cleared it away, and incidentally 'Bije yanked the prayer meetin' out of the scuppers and set 'em to work. Then Nat suggests gettin' the spare compass and, lo, and behold you! there wa'n't any. Compasses cost money and money's made to keep, so Zach thinks.

"So there they was. Wind was fair, or ought to be, but 'twas blowin' hard and so thick you couldn't hardly see the jib boom.' Zach he wanted to anchor, then he didn't, then he did, and so on. Nobody paid much attention to him.

"'What'll we do, Nat?' says 'Bije. He knew who was the real seaman aboard.

"'Keep her as she is, dead afore it, if you ask me,' says Nat. 'Guess we'll hit the broadside of the cape somewheres if this gale holds.'

"So they kept her as she was. And it got to be night and they knew they'd ought to be 'most onto the edge of the flats off here, if their reck'nin' was nigh right. They hove the lead and got five fathom. No flats about that.

"Zach was for anchorin' again. 'What do you think, Nat?' asks 'Bije.

"'Anchor, of course, if you want to,' Nat says. 'You're runnin' this craft. I'm only passenger.'

"'But what do you think?' whines Zach. 'Can't you tell us what you do think?'

"'Well, if 'twas me, I wouldn't anchor till I had to. Prob'ly 'twill fair off to-morrow, but if it shouldn't we might have to lay out here all day. Anyhow, we'd have to wait for a full tide.'

"'I'm afraid we're off the course,' says 'Bije, 'else we'd been acrost the bar by this time.'

"'Well,' Nat tells him, 'if we are off the course and too far inshore, we would have made the bar—the Bayport bar—if not the Trumet one. And if we're off the course and too far out, we'd ought to have deeper water than five fathom, hadn't we? 'Course I'm not sure, but—What's that, landsman?'

"'Three and a half, sir,' says the feller with the lead. That showed they was edgin' in somewheres. Nat he sniffed, for all the world like a dog catchin' a scent, so 'Bije declares.

"'I can smell home,' he says.

"Three fathom the lead give 'em, then two and a half, then a scant two. They was drawin' six feet. Zach couldn't stand it.

"'I'm goin' to anchor,' he squeals, frantic. 'I believe were plumb over to Wellmouth and drivin' right onto Horsefoot Shoal.'

"'It's either that or the bar,' chimes in 'Bije. 'And whichever 'tis, we can't anchor in the middle of it.'

"'But what'll we do?' shouts Zach. 'Can't nobody say somethin' to do?'

"'Tell you I smell home,' says Nat, calm and chipper, 'and I'd know that smell if I met it in Jericho. Ha! there she deepens again. That was the bar and we're over it.'

"The wind had gone down to a stiff sailin' breeze, and the old Debby S. slapped along afore it. Sometimes there was twelve foot under her keel and sometimes eight or nine. Once 'twas only seven and a half. Zach and 'Bije both looked at each other, but Nat only smiled.

"'Oh, you can laugh!' hollers Zach. 'Tain't your vessel you're runnin' into danger. You ain't paid out your good money——'

"Nat never answered; but he stopped smilin'.

"And all to once the water deepened. Hammond swung her up into the wind.

"'Now you can anchor,' says he.

"'And 'bout time, too, I guess', says 'Bije. 'I cal'late the skipper's right. This is Horsefoot and we're right between the shoals. Yes, sir, and I hear breakers. Lively there!'

"'Breakers or not,' says he. 'I tell you I've smelt home for the last half hour. Now, by the jumpin' Moses, I can taste it!'

"And inside of a couple of shakes come the rain. It poured for a while and then the fog cleared. Right acrost their bows was Trumet, with the town clock strikin' ten. Over the flat place between the hills they could see the light on the ocean side. And they was anchored right in the deep hole inside the breakwater, as sure as I'm knee high to a marlin spike!

"'Bije just stared at Hammond with his mouth open.

"'Nat,' says he, 'you're a seaman, if I do say it. I thought I was a pretty good bay pilot, but I can't steer a vessel without a compass thru a night as black as Pharaoh's Egypt, and in a thick fog besides, and land her square on top of her moorin's. If my hat wa'n't sloshin' around thirty mile astern, I snum if I wouldn't take it off to you this minute!'

"'Nat,' stammers Zach, 'I must say I——'

"Nat snapped him shut like a tobacco box. 'You needn't,' says he. 'But I'll say this to you, Zach Foster. When I undertake to handle a vessel I handle her best I know how, and the fact that I don't own her makes no difference to me. You just put that down somewheres so you won't forget it.'

"And this mornin'," crowed Captain Zebedee, concluding his long yarn, "after that, mind you, that lubber Zach Foster is around town tellin' folks that his schooner had been over the course so often she couldn't get lost. She found her way home herself. What do you think of that?"

The two members of the parish committee left the parsonage soon after Captain Mayo had finished his story. Elkanah had listened with growing irritation and impatience. Zebedee lingered a moment behind his companions.

"Don't you fret yourself about what happened last night, Mr. Ellery," he whispered. "It'll be all right. 'Course nobody'd want you to keep up chummin' in with Come-Outers, but what you said to old Eben'll square you this time. So long."

(Continued Next Week.)

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Markets

PHILADELPHIA PRODUCE

Philadelphia, Pa., Nov. 3, 1919.

The arrivals of potatoes from day to day have been just about equal to the market requirements under a firm active demand so there has been no accumulation and a better tone at the higher prices which were noted in these columns last week. New Jersey Giants are selling at $3.60@3.65 per 100-lb. sack with the No. 2's at $2.25@2.50. The round stock in 150-lb. sacks bring from $4@4.10 per sack. The Penna. potatoes continue to bring the top prices of the market selling at $2.65@2.90 per cwt. for the general run, with the extra fancy at $2.90@3 per cwt. The New York State potatoes show practically no change from last week except that there is some poorer stock which makes the wider range of $2.30@2.60 per cwt. The Eastern Shore second crop is now on the market and selling from $3.50@4.25 per barrel. Potatoes hauled in by the nearby farmers remain unchanged at 90c@$1.10, mostly with the extra fancy at $1.15@1.20.

The trade is giving New Jersey grown sweet potatoes the preference over the Eastern Shore stock. There were three cars of Eastern Shore sweets offered today but they met a rather slow demand at $3.50 per barrel for the No. 1's with No. 2's at $2@2.25. New Jersey sweet potatoes are quite active at 85c@$1 per basket for No. 1 yellows, with reds bringing from 80c@$1.10, and No. 2's of both yellows and reds selling from 30@60c as to size. Southern Yams are very plentiful and meeting a slow market at $2.75@3.25 per barrel.

Vegetables

With the season of nearby green and wax beans practically at an end, shipments from Virginia and the Carolinas are now in order. This morning a car of Virginia green beans sold at $2.50@2.75 per half-barrel hamper, and a car of South Carolinas sold at $2.75@3 per thirds-barrel hamper for both green and wax. A few Floridas were here by express which sold at higher prices. Nearby bunch beets are firmer at $3@4 per 100 bunches. The loose beets are lower at $1.50@2.25 per barrel. Brussel Sprouts are more plentiful from Long Island and selling mostly at 15@18c per quart with a very few at 20c and some poor as low as 12c. Cabbage shows a little advance over last week with N. Y. State Danish now selling at $30@33 per ton, and Domestic at $20@25. Nearby all supplies of cauliflower are coming from the vicinity of Buffalo, N. Y., sales of which range from $2.75@3 per crate for extra fancy, and $1@1.50 for fancy. Celery remains practically unchanged at 15@60c per bunch for the washed, while the rough or unwashed range from $2@3 per crate. A few southern cucumbers are making their appearance on the market and selling around $5 per box. Egg plants are very scarce and good southern stock is selling at $4.50@5 per box. Garlic remains steady at 20@30c per lb. Horseradish is scarce and higher bringing from $7@9 per cwt. as to size and quality. Fancy New Jersey lettuce is firm and active at $2@3 per box with hampers bringing from $1@1.75. There was a car of lettuce from California here this morning which sold from $4.50@5 per box. Virginia lettuce is arriving in very poor quality and selling at low prices. Lima beans are lower due to the fact that quality is poor and most sales range from $2@2.50 per basket but good stock would readily bring $3 per basket or better. Mushrooms are practically unchanged from last week most sales being made at $1.25@1.75 per 3-lb. basket. Nearly all the onions here are showing sprouts on account of having passed thru the recent hot weather, and while with the colder weather now prevailing there is a better demand, prices are showing no improvement, sales ranging from $3@3.75 per 100-lb. sack as to quality. Best picklers bring $1.50, but poor, sprouted ones are hard to sell at 60c@$1 per sack. New Jersey onions in hampers show practically no change at 80c@$1.25 per hamper. Okra is about steady at $3@3.50 per hamper. Parsley is a little more active at the unchanged prices of about 25c@$1.25 per hamper. The nearby pepper season is nearly over, but on account of the wide range in quality sales are being made all the way from 50c@$1 per basket. Romaine is lower with $1.25@1.50 being the prevailing price. Radishes are in lighter supply and higher when fancy, best selling at 2@2½c per bunch with some poor at 1@1½c. Altho a few nearby tomatoes are still here, the quality is very irregular and quotations are mostly nominal at 75c@$2 per ⅝-basket. New Jersey and Pennsylvania turnips are about steady at 25@55c per ⅝-basket for the whites and 50c@$1 per basket for the yellows. The large rutabagas continue to meet a slow movement from $1.50@1.75 per cwt. New Jersey spinach is doing better and selling from 30@60c per basket as to quality.

Fruits

There has been a very strong, active demand for apples and the market is ruling firm and active on all grades, with strictly fancy apples possibly a little higher than they were a week ago. Pears are not quite so plentiful but as the quality is not so good, nearly all the pears showing more or less weakness, lower prices are prevailing. The season on grapes is nearly over but as most of the supplies are showing more or less poor condition the market is weak and lower. At this writing sales of the various kinds of fruits are being made at prices ranging about as follows:

Apples, barrels, Baldwins, $5@7.75; a few at $8; Ben Davis, $4.50@6; Black Bens, $5@7; Black Twigs, $5@7.50; Ganos, $4.50@6.50; Greenings, A Grade, $7@8; Grimes Golden, A 2½ inch, $9; Kings, A Grade $7.50@8; Twenty Ounce, $5.50@8; Stayman Winesaps, $5.50@8; Extra Fancy, $8.50@9; Wealthy, $4.50@7.50; Wolf River, $6@7.50; Rome Beauty, $5@8; York Imperials, $5.50@7.50; Starks, $5.50@6.50; Spys, $5.50@6; 2½ inch Spitzenberg, $8; Cloudy Winesaps, $5.75. Bulk Apples: Per cwt. Spys, $3.60; mixed varieties, (small), $2.50. Pears bushels: Seckels, $4@4.50; Buffins, $2.75; Lawrence, $3; Sheldons, $4; Beurre Bosc, $3.50@4; Louis Bond, $2.75; Howell, $2. Grapes, Concords, Jumbo Baskets, $1.15@1.25. Pony basket, 30@32c. Honey Dews, crate, $2.50@2.75.

Poultry

The market on fancy heavy live fowls is firmer and higher but a good many of the supplies are coming in poor condition, thin and otherwise unattractive. On this class of stock the market is weak and draggy. Supplies of ducks, geese, and turkeys are moderate and on these the market is ruling steady and unchanged. At this writing prices are ruling about as follows: Live fowls, heavy, 34@36c; inferior, 24@32c; chickens, fine quality, 28@32c; inferior, 23@26c. Old roosters, 21@23c; ducks, white Pekins, 30@32c. Other varieties, 28@30c; geese, 27@30c; turkeys, 32@36c.

Eggs

Supplies of eggs are comparatively light and under a good demand. Prices are ruling firm with values practically unchanged from last week. The range being as follows: Current receipts 65c; firsts, 67@70c; Western firsts, 63@65c; extra firsts, 67c.

LANCASTER PRODUCE MARKETS

Lancaster, Pa., Nov. 3, 1919.

County butchers reported today that their week-end business had been cut deeply by the substitution of rabbits on the tables for dinner, and by the sale of huge quantities of surplus army bacon by the Kiwanis Club. Produce, abundantly offered, met a good sale however, and eggs were held firmly at eighty cents despite a big supply.

Butter and Eggs.—Creamery butter, 75c per lb.; country butter, 70@75c per lb.; eggs, 78@80c per dozen; duck eggs, 60c; goose eggs, 10c each.

Poultry.—Dressed old chickens, $1.25@1.75 each; dressed young chickens, 85c@$1.30 each. No live fowls offered.

Vegetables.—Corn, 20@30c dozen; beans, 10@12c ½ peck; tomatoes, 8@10c box; lima beans, 25@30c quart; cabbage, 5@10c head; lettuce, 10@15c head; sweet potatoes, 35c ½ peck; potatoes, $1.65@1.75 bushel; do., 30c ½ peck; turnips, 30c ½ peck; spinach, 20c ½ peck; beets, 5c bunch.

Fruit.—Apples, 40@60c ½ peck; pears, 25@30c ½ peck.

Grain Market.—Wheat, $2.20 per bushel; rye, $1.65; oats, 85c; corn, $1.95; Timothy hay, $30 per ton; mixed hay, $28; wheat straw, $10; oat straw, $8.

YORK PRODUCE MARKETS

York, Pa., Nov. 3, 1919.

The markets are practically at a standstill. Altho there has been no killing frost in this territory up to this time, the supplies of the usual fall produce are naturally exhausted. There is an abundance of lettuce and spinach but the demand is so light that few take the trouble to gather any for the markets. Cabbage is far from a normal crop in the county, yet the call for it is so small that what is here sells far below its value. Potatoes are very slow. The price is maintained at around $1.50 but the amount sold is small.

Eggs.—75c per dozen.

Butter.—Country, 65@70c lb.; separator, 70@75c per lb.; milk, 10c quart.

Poultry.—Hens, 24@25c lb.; springers, 25c lb. dressed, 75c@$1.75 each.

Vegetables. — Potatoes, 15@25c ½ peck; $1.50 per bushel; cabbage, 3@8c a head; lettuce, 2@5c head; beets, 5c box; onions, 3c bunch; 15@20c ½ peck; radishes, 5c bunch; lima beans, 15@25c quart; soup beans, 15@20c quart; celery, 3@8c stalk; lard, 38@43c; turnips, 10@15c ½ peck; spinach, 10@15c ½ peck.

Fruit.—Apples, 25@50c ½ peck; pears, 10c box; 15c ½ peck; quinces, 5@10c each.

Retail Grain Market.—Wheat, $2.40; corn, $2; oats, $1; rye, $1.68; bran, $3 per cwt.; middlings, $3.50 cwt.

Wholesale Grain Market.—Wheat, $2.20; corn, $1.60; oats, 80c.; rye, $1.50; bran, $47 per ton; middlings, $60 per ton.

BALTIMORE PRODUCE

Baltimore, Md., Nov. 3, 1919.

Butter.—Creamery, western fancy, 69@70c; choice, 68@69c pound prints, 70@71c Nearby rolls, 45@46c; Dairy prints, 45@46c.

Eggs.—State, Pennsylvania and nearby, 64@65c. Eastern Shore and Virginia, 64@65c. Southern, 62c.

Live Poultry.—Springers, 28@29c lb.; old roosters, 20@21c; old hens, 29c lb.; ducks young, 28@30c; do., poor, 24@25c; guinea fowls, 80@85c.

Grains.—Bag lots by sample $2.15@2.35, wheat, new, No. 1 red, $2.30 do., No. 3, $2.32; garlicky, $2.32; Corn, $1.50. Oats, standard white, 75@80c; rye, nearby, $1@1.50.

Hay.—No. 1 timothy, $31.50 ton; do., standard, $30.50 ton; light clover, mixed, $29@30 ton. Clover, mixed, $28. Tangled rye straw, $14.50. Wheat straw, $12@13. Oat straw, $14@15 ton.

Western Spring Bran, per ton, in 100-pound sacks, $42@43; City Mills Winter Bran, per ton, in 100-pound sacks, $50; brown middlings, per ton, in 100-pound sacks, $55; white middlings, per ton, in 80-pound sacks, $67. Quotations on City Mills feeds are jobbing prices.

NEW YORK PRODUCE

New York City, Nov. 3, 1919.

Butter.—Steady; receipts, 9,513 tubs; creamery, higher than extras, 70@70½c; creamery, extras, 92 score, 69½c; firsts, 61@69c; packing stock, current receipts, 47@48c.

Eggs.—Irregular; receipts, 7,527 cases; fresh gathered extras, 65@70c; extra firsts, 65@68c; firsts, 59@64c; state, Pennsylvania and nearby western, hennery, whites, fine to fancy, 93@95c; state, Pennsylvania and nearby hennery, white ordinary to prime, 70@92c; state, Pennsylvania and nearby hennery, browns, 74@76c; state, Pennsylvania and nearby gathered browns and mixed colors, 70@72c.

Cheese.—Firm; receipts, 1,154 boxes; state, whole milk, flats, current make, specials, 32½@33c; do., average run, 31½@32¼c; state, whole milk, twins current make, specials, 31½@32c; do., average run, 31c.

Poultry.—Live, steady; chickens, 28c; fowls, 24@30c; old roosters, 20c; turkeys, 35c.

Dressed poultry, steady; fowls, 24@37c; old roosters, 21@22½c; chickens, 25@45c; turkeys, 35@45c.

Vegetables.—Potatoes, Long Island, $4.50@5.25 per 165-lb. bag; Jersey No. 1, $3@4 bag. Beans, green, 25c@$1.25 basket; do., lima, $2@4.50 basket. Beets, $2@2.50 per barrel. Carrots, $1@1.75 per bbl. Cabbage, $3@7 per 100. Lettuce, 50c@$2.50 basket. Tomatoes, $1@2 per bushel, New Jersey, $1@2 carrier.

Fruit. — Apples, McIntosh, $5@11; Wealthy, $4.50@6.50, Baldwins, $4@7 Northern Spy, $4@9.

PITTSBURGH PRODUCE

Pittsburgh, Pa., Nov. 3, 1919.

Butter.—Creamery, 73c; tub, 72c; cooking, 54@55c; nearby dairy, 67@69c.

Cheese.—New York full cream, 34@35c. Ohio, 32@33c. Wisconsin Swiss, 54@55c. Philadelphia cream $1@1.10 per dozen.

Eggs.—Fresh select 70c. Candled storage 54@55c. Storage, 49@50c.

Potatoes.—Round, $4@4.50 per 150 lb sack. Onions, $3@4 sack. Cabbage, $1@1.25 bushel. Lettuce, New York, $2.50@3 box. Sweet potatoes, $4@4.25 barrel. Cauliflower, $2.50@2.75 crate. Turnips, $1@1.50 bu. Celery, 35@50c dozen. Beans, wax and green, $2.50@3 bushel. Squash, 90c@$1 bushel. Beets, new, 20@30c doz.

Fruit.—Apples, $2.50@3.25 bushel. Quinces, $2.25@2.75 bushel. Grapes New York state 4-quart basket, 38@40c. Chestnuts, 15c pound.

PHILADELPHIA LIVE STOCK

Philadelphia, Pa., Nov. 3, 1919.

Receipts of live stock for week ending November 1 were as follows:

	Beef Cattle	Sheep and Lambs	Hogs
Total for Week	2,121	9,894	7,966
Previous Week	2,894	8,211	7,030

Calves.—Receipts of calves last week were 1,932 head against 1,338 head week previous.

Beef Cattle.—Fine steers were scarce and firm, but ordinary undergrade stock ruled weak. Cows and calves were dull and easier. Steers, good to choice, $16@17; do., fair to good, $13@16; common to fair, $11.50@13; cows, fat, per pound, good to choice, corn fed, 9@11¼c; fair to good, 7½@9c; do., common to fair, 6½@7½c; calves, extra choice, $20@20.50; fair to good, $18@20; common, $12.50@16.50; heavy, $8.50@12.50; Tennessee choice, $16@18; other southern, $9@13.

Sheep and Lambs.—The market for sheep ruled steady under moderate supplies and a fair demand for fine stock. Lambs were in fairly liberal supply and dull, with little change in prices. Sheared sheep, wethers, extra, $10.50@11; good to choice, $9@10; medium, $7@8; common, $3.50@5; ewes, fat heavy, $7.50@8.50; spring lambs, choice, $14.50@15; medium, $12.50@14; culls and common, $10@11.50.

Hogs.—The market ruled firm and higher under light offerings, stronger western advices and a fair demand. Quotations for best western, $17@17.50; nearby, good, $13.75@14.25.

City Dressed Stock.—Trade was slow and the market for steers heifers and cows ruled weak and lower under more liberal offerings. Lambs and calves were also weak and lower, due to increasing offerings, a light demand and increased pressure to sell. Hogs were in fair request and slightly higher under light offerings.

Steers, 18@26c; heifers, 12@20c; cows, 12@15c; calves city, dressed, choice, 23@27c; country dressed, 20@25c; sheep, 16@19c; lambs, spring, 23@26c; hogs, 21½c.

LIVESTOCK

Lancaster, Pa., Nov. 3.—Cattle. — Receipts, 5,910 heads against 8,423 heads last Monday; market active; prices steady; yards nearly clear at close of trading; good to choice steers, $14.50@16; medium to good steers, $13@14.50; common to medium steers, $9@10.50; fat, choice heifers, $11.25@12.50; fair to good heifers, $9.50@10.50; common to medium heifers, $7.50@9.50; good to prime cows, $9@11.50; fair to good cows, $7@9; medium to fair cows, $6@7; common to medium cows, $4.50@6; good to choice bulls, $10@11.50; fair to good bulls, $9@10; common to fair bulls, $6.50@8; good to choice oxen, $10@12; fair to good oxen, $8.50@10; common to medium, $6@8.50; calves, grading from $7 poor to $20 best grade, good to choice, feeding steers, $12@12.25; medium to good feeders, $10.50@12; common to medium feeders, $8.50@10.50; good to choice stock steers, $10@11.50; medium to good stockers, $6.50@8.50; good stock bulls, $9@10.50; common grades, $6@7.75.

Hogs.—Receipts, 722 heads; market active; prices slightly higher; good to prime, $14@15.50; light to medium, $13@14; roughs, $12@13; stags to sows, $11.50@12.50.

Chicago, Ill., Nov. 3.—Cattle.—Receipts, 62,000; weak; beef steers, medium and heavy weight, choice and prime, $17@19.65; medium and good, $10.50@16.75; common, $8.25@10.50; light weak, good and choice, $13.75@19.25; common and medium, $7.25@13.75; butcher cattle, heifers, $6.35@14; cows, $6.25@12.75; canners and cutters, $5.25@6.25; veal calves, $17@18.25; feeder steers, $6.75@12.75; stocker steers, $6@10; western range steers, $10.75@15.25; cows, and heifers, $7.50@12.50.

Sheep.—Receipts, 47,000; weak; lambs, $13@14.75; culls and common, $8.50@11.75; ewes, medium, good and choice, $6.75@8; culls and common, $3@6.50; breeding, $6.75@12.50.

PHILADELPHIA HAY AND GRAIN

Philadelphia, Pa., Nov. 3, 1919.

Baled Hay and Straw.—Receipts, 36 tons of hay and 1 car of straw. Steadily held. Timothy hay, No. 1, $32; No. 2, $28@30; No. 3, $24@27; clover-mixed hay, light mixed, $28@30; No. 1 mixed, $26@27.

Straw, No. 1 straight rye, $14.50; No. 2, do., $12.50@13; No. 1 tangled rye, $13; No. 2, do., $12@12.50; No. 1 wheat straw, $12.50@13; No. 2, do., $11.50@12; No. 1 oat straw, $12.50@13; No. 2, do., $11.50@12.

Bran.—Quiet and unchanged. We quote: car lots to arrive, including sacks—soft winter bran, western in 100-lb. sacks, per ton, $45@46; spring bran, in 100-lb. sacks per ton, $43.50@44.50.

Corn.—Yellow to arrive, $1.55@1.60.

Oats.—No. 2 white, 81@82c; No. 3, 80@80½c.

NEW YORK HAY AND GRAIN

New York City, Nov. 3, 1919.

Feed.—While the feed market showed a very firm undertone, the strength was due more to an absence of offerings than to any material improvement in the volume of the demand. Mills were not inclined to press sales and there seemed to be a disposition to anticipate a falling off in the production, altho buyers were inclined to be conservative about making purchases.

Quotations: City feed, bran, $45; middlings, $54, in 100-pound sacks; red dog, $69, nominal, in 100-pound sacks; western spring bran, $44.50@45; standard middlings, $49@50; flour middlings, $59@60; red dog, $68.50@69.50, all in 100-pound sacks, 30-day shipment. Oat feed, $28@30; rye middlings, $52; white hominy feed, nominal, all in 100-pound sacks. Cottonseed oil meal, $75.50; linseed oil meal, $76, in 100-pound sacks.

Hay and Straw.—Offerings are still light at most harbor points; there is a fairly active demand and the situation continues in sellers' favor thruout. This is especially true in Brooklyn where sales are reported at very extreme prices. Rye straw offering in Brooklyn at $14 and $15 in Manhattan. Oat straw continues scarce.

Hay.—No. 1 large bales, $35 ton. No. 2, $32@34 ton; No. 3, $29@32; shipping, $27@29 ton. Fancy light clover mixed, $33 ton. Clover, No. 1, mixed, $31@32.

Straw.—Per ton, No. 1 rye, $14@15; No. 1, oat, $15@16.

Wheat.—No. 2 red, $2.37½; No. 2 hard winter, $2.37½.

Corn.—No. 2 yellow, $1.62¼; No. 3 yellow, $1.61¾.

Oats.—No. 2 white, 81@82c; No. 3 white, 81½c.

Rye.—Export, $1.53½.

PITTSBURGH HAY AND GRAIN

Pittsburgh, Pa., Nov. 3, 1919.

Hay.—No. 1 timothy, $28.50@29; No. 2, $26.50@27; No. 3, $24@25; No. 1 light mixed, $28@28.50; No. 1 clover mixed, $29@29.50; New No. 2 clover mixed, $25@26.

Straw.—Receipts of straw very light, only a few cars arrived during week. Buyers are active in securing winter supplies.

No. 1 oat, $11.50@12; No. 2, $11@11.50; No. 1 wheat, $11@11.50; No. 2, $10.50@11; No. 1 rye, $11.50@12; No. 2, $11@11.50.

Ear Corn.—Receipts and demand are both light, not much trading. Buyers anticipating lower market. New No. 2 ear corn offered at $1.30 per bushel.

Oats.—Slight decline in market owing to heavy arrivals. Market very quiet. No. 1 white, 76@77c. No. 2, 76@76½; No. 3, white, 74@75.

PHILADELPHIA DAIRY MARKET

Philadelphia, Pa., Nov. 3, 1919.

Butter.—Receipts, 1,629 tubs. The market was draggy and largely nominal. Supplies exceeded the demand and a good deal of butter was going into refrigerators for lack of an outlet. Following were the prices quoted: Fresh, solid-packed creamery, fancy, high-scoring goods, 71@73c; the latter for jobbing sales; extra, 70c; extra firsts, 66@67c; firsts, 57@61c; seconds, 53@56c; sweet creamery, choice and fancy, 72@74c; fair to good, 61@70c; ladle-packed, as to quality, 49@51c; packing stock, 46@48c; fancy brands of nearby prints jobbing at 76@78c; good to choice, 66@75c; fair, 60@64c.

Cheese.—Firmly held. Quotations were as follows: New York whole-milk flats, fancy, 33@33¼c; fair to good, 31½@32½c; Wisconsin, whole-milk flats, fancy, 33@33½c; fair to good, 31@32c; jobbing sales of fancy goods, 34@35c.

NEW YORK MILK MARKET

New York City, Nov. 3, 1919.

Business was fairly active in all parts of the city last week and surplus not quite so heavy. The November rate for 3 percent milk in 200 mile zone is $3.33 per 100 lbs. or about 7.2 cents per quart. Add 4 cents per 100 for each one-tenth of one percent additional butterfat.

Receipts of milk and cream in 40-quart cans for the week ending November 1, 1919, were as follows:

Railroad	Milk	Cream
Erie	40,622	3,216
Susquehanna	6,641	98
West Shore	14,723	1,577
Lackawanna	58,415	2,110
N. Y. Central (long haul)	134,446	2,310
Ontario	47,322	1,897
Lehigh Valley	45,399	1,028
New Haven	6,773	78
Pennsylvania	12,412	489
Other Sources	6,000	250
Totals	372,756	14,318
Same week last year	370,306	10,148

TOBACCO MARKET

Seeking to restore depleted sources of revenue those who have been instrumental in bringing about such depletion are now proposing to further tax the tobacco industry. Those who buy cigars and other tobacco products are familiar with present prices which it should be remembered are composed largely of taxes, taxes, and with more taxes we should simply be adding further to the cost of existence. Such propositions should be promptly suppressed, but it would seem that the public is inclined to be "easy" in matters of this nature. A few sales of sound tobacco were reported during the week these being of the more ordinary quality, it was said. Those sales were made at $12@13 per cwt. tobacco to be delivered in bundles unsorted, all grades tied together. This is said to be equivalent to $16 for wrappers, a price that would not meet the approval of the generality of sellers who will evidently hold for $20@25 per cwt. Should the market situation continue as at present much of the crop will be packed by growers as they did with last year's product, large amounts of which are now being sold at a satisfactory profit as compared with what would have been received last winter. A communication discussing the market situation emphasizes aright the imprudence of "knocking" especially as direct against the large buying concerns which it is noted are essential to all and being mere men should be approached as such. Also due credit is apportioned the several more or less successful efforts at local organization including a tribute to the more or less unpopular pioneer in this line of effort who, it is admitted, "has done more good than harm by arousing tobacco growers."

FARMER'S NATIONAL CONGRESS

(Continued from Page 15.)

gram, ably outlined the dairy situation in Washington County.

The Maryland Vegetable Growers Association met this morning in the grand jury room presided over by E. E. Nock, Stockton, Md., in the absence of James S. Smith, scheduled to preside.

The attendance was very small and the program was considerably twisted owing to the absence of scheduled speakers. However, R. W. Wellington, whose name appeared on the program, a representative of Maryland State College was present and delivered an excellent address on the "Results of Recent Tomato Investigations." He conclusively proved that crossing different varieties of vegetables greatly stimulates production and increases the yield from 3 to 5 percent. This conclusion was backed up by charted statistics on vegetable production.

E. E. Nock discussed at length the "Problems Concerned in Growing Sweet Potatoes Profitably," after which the meeting adjourned.

Prof. T. C. Johnson, Director of the Virginia Truck Experiment Station, who was to have addessed the meeting on "Seed Potato Problems" was unable to keep his appointment.

Bee Keepers' Meeting

The State Bee Keepers' Association met in the Chamber of Commerce headquarters this morning.

Dr. J. R. Abercombe, Baltimore, president of the association delivered his annual address, while G. H. Rea, specialist in agriculture of New York State addressed the meeting on "Bee Disease vs. Honey Production."

"How to Insure a Honey Crop," was the subject discussed by G. H. Gale, Extension Agriculturist, Bureau of Entomology U. S. A.

Quite a great deal of general discussion on bee culture featured the meeting.

PENROSE VS. MILITARY TRAINING

Senator Boies Penrose has come out against universal military training.

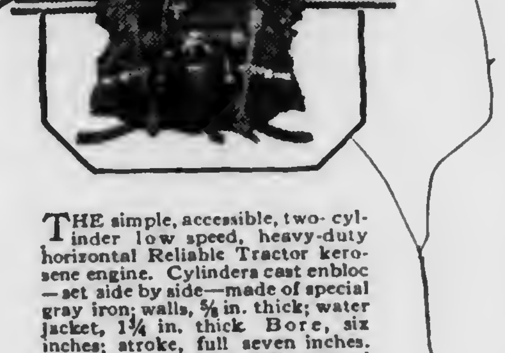
In a letter addressed to Mrs. Clarence E. Allen, 929 First Avenue, Salt Lake City, Utah—the mother of a boy who was killed in France—the Senator from Pennsylvania declares himself opposed to all the bills now in Congress providing for compulsory training. He says:

> "I have yours of the fourteenth instant, protesting as a mother against certain legislation pending in Congress providing for compulsory military training.
>
> "I am opposed to the legislation now under consideration, and do not believe it is necessary to resort to compulsory military training in order to maintain a suitable and adequate defense for the country. I am of the opinion that a small standing army, and a volunteer force when needed, will meet all the requirements of the situation.
>
> "Yours sincerely,
>
> "BOIES PENROSE."

The letter was made public here by the American Union Against Militarism which is fighting the compulsory training bills. At the headquarters of the Union in the Westory building it was said that the letter had been forwarded to the Union by the recipient who is a member of their advisory council from Utah.

RELIABLE TRACTOR

Fills Every Farm Need



THE simple, accessible, two-cylinder low speed, heavy-duty horizontal Reliable Tractor kerosene engine. Cylinders cast enbloc—set side by side—made of special gray iron; walls, ⅝ in. thick; water jacket, 1¾ in. thick. Bore, six inches; stroke, full seven inches. Valves in head give full-powered explosions. Drop forged crankshaft, connecting rod, and camshaft give excessive strength. Kerosene-tight piston rings prevent loss of power. Solid phosphorous bronze bushings, and babbit bearings. Six-feed oiler assures positive lubrication. Dixie water, dust, oil proof high tension magneto with impulse starter. Built in Reliable factory under rigid inspection and micrometer accuracy.

Let This Heavy-Duty Engine Make Your Harvests Profitable

HARVESTING tough, hard wheat loaded with plump, flinty grains, or heavy green corn demands stamina in a tractor engine. It requires a sure, steady flow of elephant-like power. The Reliable Tractor 10-20 heavy-duty engine is built to give tremendous power for this kind of work. With its simple and accessible design, and its ability to keep going, the Reliable Tractor is working for you every minute you want it to work. It loses no time because of heat—needs no rest, and is always ready for strenuous, heavy work on hot or cold days.

Reliable Tractors are built enduringly—every workman puts all his energy into making them the best tractors possible. Every Reliable contains our twelve years' experience in building thousands of engines for tractor and farm power. Today Reliable Tractors are filling every farm need so well, that owners everywhere are sending in testimonials for its proved ability.

With its structural steel frame—generous sized axles—closely cleated drive wheels—waterproof Dixie magneto—roomy driver's platform and seat—all rugged and fortified by workmanship—the Reliable Tractor is what its name means—"reliable."

The Reliable Tractor saves time and money—is easy to run, and is built to protect you from losses and delays. This makes it a sound farm investment.

Reliable Tractor & Engine Company
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Send for Our Catalog and Personal Service Blank Before You Decide

224 Acre Stock and Dairy Farm
AT LESS THAN $50 AN ACRE

4 miles from Hershey (Dauphin Co.) 1 mile to church, school, store, and hard road. About 40 acres in good pasture, 4 in orchard, 20 in timber, 10 in hog pasture, balance good farming. Buildings consist of large 9 room house; small tenant house; bank barn 60 by 90 ft., stables and forebay concrete; large concrete watering trough; stabling for 25 cows; Hinman milker with engine installed. Large corn barn implement shed; straw shed; hen house; hog house 15 by 50 ft., concrete floor and trough, equipped with star iron equipment. Scale shed with Fairbanks Standard scales, 8 ton capacity. Perfect water system with spigot in house, at barn, and in hog house. All buildings newly painted with best white paint and all new roofs. This year's crops, barn full of hay and straw, $660 worth of wheat, 200 bu. oats, over 2000 bu. corn, 100 ton good corn silage. I sold $7700 worth of stock and $3500 worth of milk in the last 10 months. All stock was raised on this farm. Still have 8 horses and colts, 22 cows, 7 heifers and 72 hogs. 25 acres sowed to wheat, with grass and fertilizer. Small amount paid down, balance time. For reference write Harry M. Horst, Cashier, Farmers Bank, Hummelstown, Pa. C. E. CASSEL, Owner, HERSHEY, PA.

FARM HELP WANTED

Milkers: Care of twenty Guernseys each. No other work.
Teamsters: Farm trucking. No dairy work.
General man to care for heating plant, automobiles, and competent to do extra driving when required.
Wages to commence $50.00 plus board and room. Working and living conditions first class. Can only use men that are reasonably experienced and able to furnish good recommendation. ANNA DEAN FARM, Barberton, Ohio.

Special Boar Sale Registered Duroc Jerseys of highest class champion blood lines. Ready for service in two sizes at $40 and $50 each, registered.
BELROSE STOCK FARMS, RICHFORD, N. Y.

PUBLIC SALE OF BERKSHIRES
Saturday, November 29, 1919
At ANNVILLE, LEBANON CO., PA.

At the old Kreider Homestead, 3 miles southwest of Annville, 2 miles southeast of Palmyra and 2 miles northeast of Campbelltown.

Entire Herd of Purebred and Highgrade Berkshire Hogs

My herd of purebred Berkshires contains the best developed and most popular blood lines of the Berkshire breed; such as, Masterpiece, Superbus, Grand Leader 2nd, Meadowview Longfellow 4th, Triune, Highwood Improver, etc.

The individuals in my herd have the great depth, the spring of rib, strong back, good straight heavy boned legs; in fact, all those desirable qualities which characterize the Berkshire breed.

Purebred hogs bought by a purchaser from a distance will be crated and delivered to R. R. Station free of charge.

Annville is situated along the Phila. & Reading R. R. between Harrisburg and Reading. Eastbound trains arriving at Annville at 10.59 A. M. and Westbound trains arriving at Annville at 11.17 A. M. will be met and intending purchasers taken to sale.

Sale begins at 1 o'clock P. M. Sharp. Terms of sale are cash.

HOWARD B. KREIDER,
Annville, Pa.

S. S. BOMBERGER, Lebanon, Pa., Auctioneer.

Holstein Heifer Calves By pure bred sire and high-grade big producing cows. Beautifully marked. Splendid individuals. $20 up. Browncroft Farms, McGraw, N. Y.

FOR SALE OR EXCHANGE for ponies Black Percheron stallion colt, two bred polled heifers bred, Jersey heifer, extra good. All registered and priced right. F. B. STEWART, ESPYVILLE, PA.

Please Mention Pennsylvania Farmer When Writing to Advertisers

Answers to "Bachelor's" Questions

SOME OF THEM GIVE CAUSE FOR SERIOUS THOUGHT

On page 16 in our issue of October 25, under the title, "Whither Are We Drifting" appears an interesting discussion of some questions which sadly puzzle "Bachelor," the writer. As was to be expected, some of our loyal, intelligent girls met the challenge and have answered him. Some of these answers we print herewith. Others came in sealed envelopes for us to direct to him. We do not know what information they contained.—Editors.

Stick to Your Job

Not all of the girls of today are ready to leave the farm and go to the city for employment. Like some of the boys, they prefer farm life; and perhaps there are some girls on the farm who fear they may become Old Maids, because all the boys want to go to the city. It may be that the majority of the girls want to go to the city, but, is this not true of the boys?

I agree with you that many girls find it lonesome in the country. Why is it? In my home there is no one to do the work but my mother, who is past sixty, and myself. I think it is any girl's place to relieve her parents of as much work as possible, and, after doing this, I find no time to be lonesome. In the past, some mothers may have riden horseback, but I know mine never did. For me, I would rather ride horseback any day than ride in an automobile. Riding and shooting are my favorite pastimes.

Today, some of the country homes have city conveniences, but mine does not. I have to wash on a washboard, iron with an iron heated on a wood fire, sweep with a broom, clean and fill lamps with oil; and still, I prefer the country. It is the only free place to live.

Bachelor, do not let your desire for the love of a pretty girl rule your better judgment, and do not seek to obtain a better trade, as the country needs farmers. Trust to Providence that a girl who is worthy of you may cross your pathway, and one who loves the farm as you do; then all will be well.—Maiden, Chester Co., Pa.

How to Keep Young People on the Farm

I read the article which one of our young farmers recently wrote for the Pennsylvania Farmer. He seems to be very much alarmed about his situation; also, about who will be the farmers of the future.

Don't be discouraged. You have not found the right girl yet. Your wife should love you; not primarily your profession or where you live. Home is where the heart is. If she loves you, her home will be in the country. But don't love your sheep and chickens better than your wife. Read, "When a Man's a Man." Note how Phil won Kitty—not by leaving the life and profession he loved so dearly.

I think the reason why so many of the young girls have left the farm is because they have had to work too hard with not enough recreation. If every farmer would make an effort to acquire all the modern improvements and also give his children a better education, I am sure they would see the advantages of staying on the farm.

One thing that is lacking in our rural communities is education. Most of the rural schools have but a seven-month term, and frequently when the boys and girls reach the ages of twelve or fourteen years they are kept from school to help with the farm work. Then they soon become discouraged and do not care to go to school; consequently, their education suffers.

If one has a fairly good education, life in the country doesn't seem so lonely. You can employ your leisure hours in reading a good book rather than going to the movies or some other place of amusement. Anyone can live in town, but it takes brain, brawn and capital to live in the country and be successful.

We should have more social gatherings, like spelling schools, debates, singing schools, etc. These would be instructive as well as entertaining. But, the farmers have all gotten too busy for anything like this. They work so hard that they are too tired to go away one or two evenings during the week and take the children with them. As a result all must stay home week after week unless he has religion enough to send him to church on Sunday.—Country Girl, Lycoming Co., Pa.

Is This Just?

In the issue of October 25th there appears an article "Whither Are we Drifting?"—an appeal to country girls to stay on the farm. As you request an explanation I will state a few facts which, in my belief, cause most girls to leave the farm. I am a young girl, only 16 years of age. I was born on a farm and have always lived on one. My few years of experience have shown me every side of country life.

These Girls Evidently Enjoy Farm Life

In the first place, many farm girls are required to do work that was not meant for them to do. I myself, belong to this class. I do most of the harrowing, cultivating and planting and during the last four years have been mowing all the grass during hay-making time; in fact, I am doing every kind of field work except plowing. We have none of the improved farm machinery such as potato planter, self-binder, etc., which serve to save labor and make farm work lighter. We do not have any of the mentioned improvements in the house to relieve the drudgery of house-work. I often come in at night tired from a day's work on the fields and have to begin in earnest in the house.

In many homes too much depends upon the women. For instance, mother and I have to care for the chickens, pigs, cows, and a big garden, besides house work and the work we do in the fields.

Another thing I want to mention is the question of money. I have never seen or heard of a girl who does not desire some money she can call her own. That's something I've never had. I sometimes work for my neighbors, but all the money I earn goes for my clothes which are poor compared with what the other girls of my neighborhood wear. I occasionally visit some of my girl friends and whenever I do so I am shown all the dainty things they receive as presents—things I, too, have often longed for but never receive.

On a neighboring farm, the father gives his two daughters one to two acres each, every year, which he plants in potatoes for them. The money from the yields is their own and by the time they grow up they have something to face life with, while I have nothing. I am fond of music but as we have no piano, and little chance of ever having one, the thought of learning music is denied me I have had several good offers to come to the city where I could have the desired music lessons and could save a nice amount of money but I have always declined out of pity for my mother. If I ever do go, I would like to know whether you or the writer from Westmoreland County think that people are justified in blaming me, or any girl in a similar position.—A Country Girl, Lehigh Co., Pa.

To the Bachelor of Westmoreland Co., Pa.

You write that you wonder why the girls leave the farm. I think I can give you a pretty good explanation. In the first place, you must live in a pretty good part of the country if you have all the conveniences of which you speak. I haven't seen a farm up in this part of the country with all those beautiful things. I love the country, but, when a girl has to work hard all day, and all she hears is that there isn't enough money to buy the necessities of life, I don't blame her for leaving the farm. I think if you would show some girl that she could have a home like you desribe, more than one girl would be willing to stay on the farm.

Don't you know that a girl can get just as lonesome in the city as in the country? They go to the city to get a little money and some decent clothes at the end of a week's work. One of the reasons the country girls get lonesome is this: My girl friend, sister and I have to walk one and one-half miles to the nearest car line, and then we have to pay from sixteen to thirty-two cents to get where we can have a little fun. Half of the time we are too tired, or haven't the money to go, so we stay home.

Do you know there is only one thing on our farm, which meets your description. That is the cats—and they are a little bit different. They sing us a solo every time we open the kitchen door, and after we give them something to eat, they are all back for more. We have five cats, so sometimes even they get on our nerves.

However, we are all working like troopers to keep up, and will certainly never leave the farm is we can only make a decent living. We don't ask for electricity and some of the other conveniences you mention, and there are hundreds of other families just like us.

If you take your letter and read everything that your grandmother and great-grandmother had, you will find everything as we have it on the farm here. When I want to go anywhere, I walk or drive. When I want a light, I have to clean and fill a coal-oil lamp. When we wash, it is on the washboard; when we iron it is with a plain, every-day iron, and we sweep with a broom. When we want water, we pump it up, when the pump works, and when it doesn't, we carry it up a twenty-foot hill. There are many industrious, young couples that have only the things I have, and it certainly will be a great time when we get all the things you mention.

There is another thing—I don't think that it is all a girl's job to make home a paradise—I think it takes two to do that.

I do not know whether this is much of an explanation, but I have done my best to make it clear why girls leave the farm.—A Country Suffragette from Bucks Co., Pa.

THE FAMILY'S FOOD

In the light of present day knowledge about crop growing and stock husbandry there should be little sympathy for the farmer who neglects to produce a large portion of the food supply for his family. Sound sense and business economy dictate that we should get away from the practice of estimating our income all in dollars and cents. Bushels, pecks, gallons, quarts and dozens are just as important. It is what we save just as much as what we earn that counts at the end of the year. One's income of fruit vegetables, eggs, poultry, honey, dairy products and other things that add to the year's food supply may be so satisfactory as to effect a big saving in the cost of living.

OUR NEIGHBORHOOD MEETINGS

So many people, especially those on the farm, feel at this time of year that they are soon to be housed up until warm weather again.

We country folk should not feel this way, for on the contrary our most pleasant times are approaching.

After the harvesting and fall plowing are done, both man and beast have seen the hardest times and instead of winter coming and shutting us in, it should release the farmer's family.

In our neighborhood, we have had for several years now, what has been termed neighborhood meetings or club. It consists in our immediate neighborhood of five of the families who meet every other Saturday evening for a good time. And a good time it is.

All are on hand at eight or a little after and eleven forty-five is the hour of departure. Generally a good visit comes first, then puzzles and tricks, for which prizes are often awarded, after which refreshments are served. Following this, the men retire to another room for a smoke and farm talk, while the women enjoy a conversation along lines of interest to them.

Though the meeting occasionally falls on a cold, blizzardly night, it never seems too bad to get out for the good time which we know is in store for us.

Everything is so very informal, there is no tax on the hostess and nothing is thought of but the pleasure derived. It is certainly surprising how much nearer neighbors are brought together in this way and how the household and farm talks help as they are passed along.

You, who haven't been enjoying the winter evenings in the past, get together with some of the other families near you and try it. I am sure you will be as pleased with the results as we are and will never again be without your "Neighborhood Meetings" during the winter.—R. L. Elliot.

MANY FARMERS WORKING TOO MANY ACRES

The Pennsylvania Department of Agriculture suggests that to obtain the maximum result from his soil, the farmer must use his brains in the business of farming as much as his muscles.

The successful farmer must love his work and then he will put his life and effort into it. Success is assured under these conditions.

The wide-awake farmer constantly keeps in mind the quality of the crops he grows. Nothing but the best will satisfy him. He must advertise in order that the purchasing public may know where they may obtain the best. If the farmer produces better wheat, or apples, or eggs, or anything else, than the other fellow; and can get his produce before the customer as distinctly his product he will have no difficulty, and success is assured.

The farmer must keep everlastingly at it and efficiency must be his watchword. The most of the farmers in Pennsylvania, and the same is likely true of other states, are working too many acres and consequently are not doing the work properly and thoroly. It is much better to produce one hundred bushels of corn on two acres, if this can be done by pursuing proper methods, than to continue under the old way and only harvest the same number of bushels from four acres.

GENTLEMEN:—We are heating our house of eleven rooms with one of your No. 240 One Pipe Furnaces. Every room is comfortable and we use much less coal than we ever did before. —GEORGE B. OTTO, Boiling Springs, Pa., March 11, 1919.

"I want a one-pipe furnace that gives healthful heat," said Andes

NOT only do I want a one pipe furnace that *saves fuel money* and gives comfortable heat; not only do I want a one pipe furnace that I can feel proud to put the name "Andes" on and that I can *guarantee*—

—but I also want a one pipe furnace that gives *healthful* heat—heat that will supply the right amount of moisture necessary for the best health. I want provision for extra large waterpans.

I want all these things, said Andes. And Andes got them.

ANDES SYSTEM

ONE PIPE FURNACE

"Better Heating for Less Money"

And because Andes insisted on perfection in all the points that make a furnace a furnace, thousands of homes today are enjoying the money-saving, the heat-comfort and the *heat-healthfulness* of the Andes System One Pipe Furnace.

It is no uncommon thing for an Andes to cut down fuel bills one-third to one-half. An Andes One Pipe will heat more rooms than a stove and use less fuel. And of course it gives *healthful* heat.

SEND FOR FREE BOOK

For the special information of those interested in money-saving, healthful heat, we have prepared a booklet, "Better Heating for Less Money." This book will be sent free upon receipt of the coupon properly filled out. If you are one of the many thousands of people to whom money-saving, *healthful* heat is a vital, every-day problem, you should at once write for this book. It's free. Write N-O-W before you forget.

Phillips & Clark Stove Co., Inc.
DEPT. P. GENEVA, NEW YORK
Manufacturers of the Famous Andes Stoves and Ranges

7

BETTER HEATING for LESS MONEY ANDES

GENTLEMEN: — We are pleased to express our appreciation of your One Pipe Andes Furnace. We are using at least one-fourth less coal.—JENNIE A. WALBRIDGE, Malone, N. Y., March 27, 1919.

PHILLIPS & CLARK STOVE COMPANY, INC.,
Department P.,
Geneva, N. Y.
GENTLEMEN:—Please send me your free, illustrated book, Better Heating for Less Money.
Name ....
Address ....
....
State ....

"Saws 25 Cords In 6¼ Hours"

That's what Ed. Davis, an Iowa wood sawyer says he did with a WITTE 6 h. p. Saw-Rig. Another claims 40 loads of pole wood in 3 hours and 20 minutes with a 6 h. p. Hundreds of WITTE Saw-Rig owners have made similar records, and are coining money.

You Can Do As Well

Any hustler can make big money with the WITTE. When not sawing you can operate other machinery. It's the one all-purpose outfit for farmers and men who make sawing a business. Prices are favorable right now. As an illustration, you can get a 2 h. p. WITTE Stationary Engine on skids, complete catalog equipment, now, for $44.95, cash with order. All other sizes, 2 to 30 h. p., at low prices. Lifetime guarantee. Big catalog of Engines and Saw outfits FREE. Write for it TO-DAY.

WITTE ENGINE WORKS
Kansas City, Mo. 2045 Oakland Ave.
Pittsburgh, Pa. 2045 Empire Bldg.

HARRISONS' NURSERIES
Fruit Trees Budded from Bearing Orchards. Peach, apple, pear, plum, cherry, quince, grape-vines, strawberry plants, raspberries, blackberries, evergreens and shade trees. Catalog free. Box 52 Berlin, Md.

Keep Dirt and Filth Out of the Milk

by clipping the cow's flanks and udders every month. Then with a damp cloth wipe the parts off in a hurry. There is no long hair to hold the dirt and the milk is clean and wholesome as it falls into the pail. Clipping all over twice a year is good for the cows. A Stewart No. 1 Machine is best. It will clip horses also. Machine all complete only $12.75 at your dealer's or send $2 and pay balance on arrival.

CHICAGO FLEXIBLE SHAFT COMPANY
Dept. A 149, 12th St. and Central Ave., Chicago, Ill.

100 A., $3300; with Pr. Horses, 8 Cows and

Bull, heifer, pigs, tools and implements, hay, fodder included for quick sale, easy terms. Convenient R. R. town, high school, 6 churches, creamery, markets, 50 acres fertile fields adapted all general croops, 16-cow pasture, wood fruit. Food buildings, 9-room house, large barn, granary, corn, poultry, hog houses. Travelling instructions to see this unusual bargain in equipped farm page 22 Strout's Fall Catalog, 100 pages Farm Bargains 23 States; copy free. STROUT FARM AGENCY, 1422 B E, Land Title Bldg., Philadelphia.

For Sick Chickens

Preventive and curative of colds, roup, canker, swelled head, sore head, chicken pox, limber neck, sour crop, cholera, bowel trouble, etc. Mrs. T. A. Morley of Galien, Mich., says: "Have used Germozone 17 yrs. for chickens and could not get along without it." Geo. F. Vickerman, Rockdale, N. Y., says: "Have used Germozone 12 years; the best for bowel troubles I ever found." Frank Stuka, Chicago, Ill., writes: "I have lost but 1 pigeon and no chickens in the 3 yrs I have been using Germozone." C. O Petrain, Moline, Ill.: "I never had a sick chick all last season." Bernard Horning, Kirksville, Mo., says: "Cured my puniest chicks this spring." Ralph Wurst, Erie, Pa., says: "Not a case of white diarrhoea in 3 yrs. I raise over a thousand a year." Good also for rabbits, birds, pet stock.

GERMOZONE is sold generally at drug and seed stores. Don't risk a substitute. We mail from Omaha postpaid in new 25c, 75c and $1.50 sizes. Poultry books free.

GEO. H. LEE CO., Dept. 429 OMAHA, NEB.

Rich Michigan Farms Low prices. Easy terms. STAFFELD BROTHERS, 15 Merrill Building, Saginaw, Michigan.

HAY Ship To The Old Reliable House
Daniel McCaffrey's Sons
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Big Reduction in OTTAWA ENGINE Prices

Look At These Low Prices →

When I reduced my manufacturing costs, I reduced prices, giving you the benefit. I am no profiteer.

2 H-P. $39.85
3 H-P. $69.65
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Prices on Portables and Saw-Rigs Outfits also very Low. 185 Styles

How This Was Done Although prices of raw materials are advancing daily, I reduced my prices to nearly pre-war level by cutting my manufacturing cost, increasing my factory production. Now my factory is the largest in America selling exclusively direct to the user, and giving the very highest quality engine.

Only Sold Direct From My Big Factory To You.

Use Cheap Fuel There is no need to use expensive fuel. Ottawa engines use low grade kerosene, lamp oil, as well as gasoline, and they use less fuel having fewer moving parts.

90 Day Trial You have 90 days in which to try the Ottawa at your own work. Prove its reliability, easy starting, small fuel consumption — everything provided in my liberal 10-year Guarantee. Sizes 1½ to 22 H-P. Stationary, Portable, Saw-Rigs—all prices low.

Easy Terms or cash if you desire. A whole year to pay are my terms to any reliable man. Make your engine earn enough to pay while you use it. You can't afford to be without an Ottawa and you need not pay more than my price.

Special Offer To you men who read this good paper—I am making a real special money-saving offer. Get it before you select any engine at any price. My new free book will go with this offer. It is the finest ever printed. Send name and address today.

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GUERNSEYS

196 368

These figures represent the average butter fat production of a grade herd in Minnesota before and after the use of a pure bred Guernsey bull. The improved herd brought the owner prosperity.—the original, only drudgery. Write to breeders for descriptions and prices and send for our free booklet, "The Grade Guernsey."

The American Guernsey Cattle Club
Box M 35, Peterboro, N. H.

QUALITY ECONOMY QUANTITY

Special Sale of Ayrshires

Few choice bull calves—A couple fine young cows, priced very reasonable to effect ready sale. Bull calves from fine A. R. cows, or cows now on test for Advanced Registry. Excellent opportunity to found a herd of high class Ayrshires. Your inquiries and visit to the farm will repay you.
CRESTMONT FARM, SUNBURY, PA.

SPOT FARM

HOLSTEINS

⅞ Holstein heifer calves $20 to $25 each express paid in lots of 5. 20 registered heifer calves. Registered bulls all ages. 25 close springer registered cows. 50 high grade yearling heifers and bulls $55 each. High grade 2-yr.-olds and close springer cows. Come to sale Oct. 14. Close to winter and must sell.
J. C. Reagan, Tully, N. Y.

MAPLE LAWN HOLSTEINS

BEST in High grades and Registered Holsteins. Elegant high grade calves $25 each. With ten calves will give choice registered bull free. Will accept Liberty Bonds and W. S. S. at par. Guarantee safe arrival and gladly ship C. O. D. Write your wants. C. W. ELLIS, JR., Cortland, N. Y.

STEVENS' HOLSTEIN FARM
OF CORTLAND, N. Y.
King Korndyke Sadie Vale Jr., No. 20391, two nearest dams averaging 36 pounds of butter in 7 days, heads my herd. Butter records from 17 pounds two-year-olds to 34 pounds at full age. Also high grade Holstein calves, either sex, $15.00 each. Write your wants. PAUL H. STEVENS, Prop.

Holstein Bulls Ready For Service
Two are coming two years old, one three years. Better see these bulls; see the size and milking ability of dams and the remarkable calves the older one is getting. They have been raised under ideal conditions and are priced right. PLUMLYN FARM, Fairview Village (near Norristown), Pa.

Oakhurst Farm Ayrshires present offering—20 young cows of the choicest strains, bred to freshen this winter and spring in calf to a high-class bull.
GUY D. POWER & SON, Auburn, N. Y.

Fine O. I. C. Pigs for sale, eligible to registry, six weeks old. Price $5 each.
THE OAKS DAIRY FARM, WYALUSING, PA.

HIGH GRADE HOLSTEIN CALVES. Either sex. Shipped anywhere. Write for prices. Satisfaction and safe delivery guaranteed. FRANK GAMEL, PINE GROVE FARM, LOCKE, N. Y.

FOR SALE—REG. HOLSTEIN BULL CALVES, from officially-tested dams. Write for prices, pictures and pedigrees. Walter M. Cruttenden, Wilkes-Barre, Pa.

Registered Holstein and Guernsey bulls from calves to serviceable age. 250 animals in the herd. BONNYMEADS FARMS, R. D. 1, Harrisburg, Pa.

HOLSTEIN BULLS Nearly ready for service. With all papers, $75 to $100. B. Smith & Son, Granville Summit, Pa.

Ayrshire Bull Calves From high record A. R. Dams
ROBERT TEMPLETON & SON, ULSTER, PA.

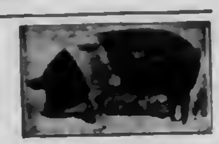
For Sale— Pure Bred Guernsey cows, heifers, and calves (bull).
RIVERVIEW FARMS, SWARTHMORE, PA.

Naturally Hornless Reg. Holstein Bull Calves $100 ea; bulls fit for service $150 up. Catalog for stamp. HORNLESS HOLSTEIN FARMS, Clarks Summit, Pa.

Milking Shorthorns Bull Calves sired by Glenside Royal Stamp for sale.
C. M. KENNEDY & SONS, Ulster, Bradford Co., Pa.

Registered Holstein Friesian Cattle Sons of the great Finderne Sir Valdessa, a 37 lb. bull, for sale.
MILLARD E. BASEHOAR, Littlestown, Pa.

Swine



HAMPSHIRES
The fast growing bacon hog. Pigs any age, bred gilts, free circular. LOCUST LAWN FARM, Bird-in-Hand, Box 2, Lanc. Co., Pa.

REGISTERED DUROC-JERSEY PIGS
$10 each while they last, all from imported Southern stock, none better. Bargains in bred gilts, service boars, brood sows and spring pigs.
C. W. Ellis, Jr., Maple Lawn Farm, Cortland, N. Y.

Fashion Herd of Big Type Poland Chinas
Spring boars ready for service, fit to head well-bred herds, sired by Giant Smooth Wonder and Ohio King 2nd, out of 700 and 800 lb. sows. Also grand lot Fall pigs, same breeding. Booking orders for Nov. delivery. Prices on app. C. S. Eppley, Zanesville, O.

REG. DUROCS Large size, heavy bone, best blood lines, prices reasonable, satisfaction guaranteed.
JOHN W. COX & SON, New Wilmington, Pa.

TARRYMOOR BERKSHIRES
Quality Growthiness Prolificacy
We guarantee satisfaction.
Robt. E. Atkinson, Wrightstown, Pa. Bell Phone.

Duroc Jerseys Fine thrifty pigs, 6 to 8 weeks old, $8 each.
HUGH BRINTON, WEST CHESTER, PA.

Reg. Poland Chinas Choice Spring gilts and boars. Aug. and Sept. and up. G. D. BARNES, R. D. 11, Grove City, Pa.

TAKING THE CENSUS

Because the farmer usually is busy in the early spring and also because the farm herds and flocks are not as replete at this period as at some other season, the date of the census has been changed to January 1, 1920, instead of April 1. Hence, on January 1 in all sections of the country enumerators will begin the work of visiting the 7,000,000 farms peopled by 35,000,000 rural citizens who comprise practically one-third of the total population of the United States.

Farmers over the country are urged by the Federal Department of Agriculture to acquaint themselves as thoroly as possible with the requirements and make-up of the census questions. Considerable figuring and accounting must be done by the farmer—altho the computations are in no respect as complicated as those essential in figuring his income-tax return—to answer accurately and fully the questions which will be put to him by the enumerator. Many of these questions cover subject matter heretofore not included. As the statistics obtained from the agricultural census will largely determine the future land policy of the Federal Government, it is every farmer's duty to make individual answers as accurately as possible. Such information involves some little study on his part previous to the appearance of the enumerator.

It is only the uninformed farmer who shies from the census enumerator. Others are glad to aid this work of assembling specific facts and figures about all the farming operations and farms of this country, since they are aware that this information is used directly for the promotion and development of better agricultural conditions thruout the country.

There are items listed under the captions of farm facilities which include particulars regarding the number of tractors on the farm, the number of automobiles, motor trucks whether the farm has a telephone, water system, and gas or electric lights. Information is also requested as to whether there is a local co-operative marketing club, and farmers are asked to give the value of all farm products sold thru or to such organizations in 1919, and also the cost of supplies purchased thru the assistance of such an association. Complete information is also asked regarding the orchard fruits, sub-tropical fruits, nuts, small fruits, fruit products, grapes or grape products, and greenhouse and hothouse areas and equipments which are produced or which are used on each farm.

GAME LAWS FOR 1919

Pennsylvania

Open Seasons.—Bear, October 15 to December 15; raccoon, September 1 to December 31. No open season for beaver. Foxes may not be trapped, shot, snared, or poisoned in Delaware County.

Trapping. — Nonresident trapper requires license (fee, $10). Unlawful to trap bears, and only one may be killed in a season or 3 to a camp or body of men. No steel traps larger than No. 3 size may be used for trapping wildcats or other fur animals. Resident requires no license for trapping, but hunting licenses required for killing raccoons or bears, which are regarded as "game" animals (fee, $1.)

Propagation.—No restrictions on raising fur anmals, except that possession and breeding of ferrets is unlawful except under license from the state board of game commissioners; fee for license to breed and sell ferrets, $25; to possess a ferret without breeding, $1.

Bounties.—Wildcat, $8; fox, $2; mink, $1; weasel, $2; paid from special fund created by setting aside one-half the receipts by the board of game commissioners from gun licenses, fine, etc.

The bounty on wildcats is increased from $6 to $8, and on weasels from $1 to $2.

New Jersey

Open Seasons.—Skunk, mink, muskrat, and otter, November 15 to April 1; raccoon, October 1 to December 15. Beaver, unlawful to trap, take, kill, or have in possession at any time. The board of fish and game commissioners may grant permits to hunt foxes with hound and firearms from the last day of the open season for quail (December 15) to May 31.

Trapping.—Skunks, minks, muskrats, and otters may not be taken in close season, except that muskrats may be destroyed by owner of canal or dam which they are destroying. Muskrats, skunk, mink, otter, may be taken by trap only, except in Salem County, above Mill Creek, where they may be taken in open season by firearms and light. It is unlawful to disturb the lodge or nesting chamber of muskrats, to molest traps set by another, or to appropriate or take animals caught in such traps.

Propagation.—No restrictions except those imposed by close seasons, during which wild animals may not be taken for breeding purposes. Breeder's license, fee $5.

Bounties.—Fox, $3; paid by counties.

It is now unlawful to take skunk, mink, or otter in any manner except by trap. The months of April and May are included in the period during which foxes may be hunted under permit from the board of game commissioners.

AGRICULTURAL INDUSTRIES' RIGHT TO FAIR RETURN ON INVESTMENT

The Pennsylvania State Chamber of Commerce, in meeting assembled, declared all laws and regulations relating to food production should be based on the fundamental proposition that returns to capital invested in agriculture should be equal to the returns to capital invested in other industry and business, and that prices of farm products should be sufficient to assure production and to pay wages essential to that end.

ALL NEED PENNSYLVANIA FARMER

I was glad to be reminded of renewing my subscription to the Pennsylvania Farmer, and was pleased at your unique way of expressing it. I have found many useful and helpful topics in your paper, pertaining to my business, namely: Poultry raising; and know that every farmer, no matter what he specializes in, would be greatly benefitted by receiving the Pennsylvania Farmer.

Wishing you continued success, and thanking you for your liberal offer, I am

(Signed) JOHN R. HERR,
Millersville, Pa.

Don't blame the door when it squeaks. The hinges are merely crying for a drink—a small one—of oil.

ABSORBINE
TRADE MARK REG.U.S.PAT.OFF
Will reduce Inflamed, Strained, Swollen Tendons, Ligaments, or Muscles. Stops the lameness and pain from a Splint, Side Bone or Bone Spavin. No blister, no hair gone and horse can be used. $2.50 a bottle at druggists or delivered. Describe your case for special instructions and interesting horse Book 2 R Free. ABSORBINE, JR., the antiseptic liniment for mankind, reduces Strained, Torn Ligaments, Swollen Glands, Veins or Muscles; Heals Cuts, Sores, Ulcers. Allays pain. Price $1.25 a bottle at dealers or delivered. Book "Evidence" free.
W. F. YOUNG, Inc., 154 Temple Street, Springfield, Mass.

ECONOMY FEEDER
A perfect working self-feeder for hogs. A 100-lb. pig pays for it. Saves on purchase price, time, floor space, repairs and feed. Will feed 40 hogs. Sold direct, $18.50. Money refunded if not satisfied. For further information address, THE ECONOMY FEEDER CO., Box 430 New Washington, O.

MINERAL HEAVE COMPOUND In use over 50 years
CURES HEAVES
Booklet Free
$3.25 Box guaranteed to give satisfaction or money back. $1.10 Box Sufficient for ordinary cases. (Includes War Tax.)
MINERAL HEAVE REMEDY CO., 408 Fourth Ave., Pittsburgh Pa.

Fistula & Poll Evil
Approximately 10,000 cases are successfully treated each year with
Fleming's Fistoform
No experience necessary; easy and simple; just a little attention every 5th day. Price $2.60 a bottle (war tax paid)—money refunded if it fails. Send for free copy of FLEMING'S VEST-POCKET VETERINARY ADVISER Valuable for its information upon diseases of horses and cattle. 197 pages, 67 illustrations. Write today.
Fleming Bros., Chemists 253 Union Stock Yards, Chicago, Ill.

Miscellaneous

Ayrshires, Percherons and Berkshires
We have what you want.
Crestmont Farm, Sunbury, Pa.

PENNS VALLEY STOCK FARM
Percherons, Berkshires, Holsteins
"Young Service Boars, pigs either sex."
W. F. RISHEL, CENTRE HALL, PA.

WANTED Nuts (all kinds), calves, poultry, fancy eggs and Hot House lambs.
WM. H. COHEN & CO., 232 Washington Street, New York City.

Near-By Stock Farm Offers Reg. Ayrshire cattle; Reg. Berkshire pigs, all ages; White Wyandottes, all the most popular blood lines. J. A. McMAHAN, Pottsgrove, Pa.

COLLIE PUPPIES Handsome white male $20, sable and white females, $15. Pedigreed and champion stock. HUGH BRINTON, West Chester, Pa.

Chester White Hogs, All Ages
Shorthorn Bulls. R. L. MUNCE, Canonsburg, Pa.

For Sale: Registered C. W. gilts and serviceable boars and pigs. Also Jersey Bulls, all ages. J. A. BOAK, NEW CASTLE, PA. R. 4.

Poultry

For Sale: 50 BARRON STRAIN WHITE LEGHORN
Pullets, 5 months old, $2 each and 50, 4½ months old, $1.75 each.
H. P. MAINE, ROBBINS, DEL.

Selby Service Satisfies Ship us your produce, poultry and eggs. Penna. Potatoes a specialty. Returns day goods are sold. Ask for our market letter.
SELBY PRODUCE CO., PHILADELPHIA

For Sale Some Extra Fine Cockerels. Purebred R. I. Reds, B. P. Rocks, White Leghorns, Black Minorcas, 5 and 6 months old, $2.00 each. M. E. BASEHOAR, LITTLESTOWN, PA.

S. C. White Leghorn Baby Chicks for 1920 delivery. Tom Barron strain. Order early. C. P. Shirey, Stewartstown, Pa.

Barred Rock COCKERELS good strains, $3.00 to $4.00 each. J. I. HERETER, Gettysburg, Pa., R. 4.

Barred Plymouth Rocks (Pullet line) Buttercups and Ancona Cockerels. Also limited supply of pullets. Prices reas. J. K. Cadwallader, Wellsville, Pa. R. 1.

Sheep

For Sale 1 Shropshire and 1 Yearling Rambouillete ram. Also large ram lambs, both breeds. 6 growthy O. I. C. sows, April and May farrow. Stock reg. H. C. Beardsley, Montour Falls, N.Y.

SHROPSHIRE YEARLINGS AND RAM LAMBS of wool-mutton quality. Also O. I. C. boar pigs of April farrow. C. P. ANDREWS, Dansville, Mich.

REGISTERED SHROPSHIRE RAM LAMBS
Some ready for light service. Price right.
L. C. TOMKINS, ELLENTON, LYC. CO., PA.

BERKSHIRES Superior, Epocal, Rival Champion Blood. Pigs $15 and up. C. D. BARNES, R. D. 11, Grove City, Pa.

Veterinary

Conducted by W. C. Fair, V. S.

Advice thru this department is free to our subscribers. Each communication should state history and symptoms of the case in full; also the name and address of writer. Initials only will be published. We cannot make reply by mail. This is one of the most valuable columns of the paper and we invite readers to make use of it. Clippings from this column, when properly preserved and classified, make one of the most valuable medical symposiums a farmer-stockman can obtain.

Weak Back.—My 12-year-old cow, has good appetite, does not appear to be sick, but is inclined to drag her hind toes on ground and when down drags hind quarters. Have been unable to find a tender spot, this lameness came on 2 weeks ago. Vincentown, N. J.—Mix equal parts turpentine, aqua ammonia and raw linseed oil, rub some on back and stifle joints once or twice a day. She should be well fed.

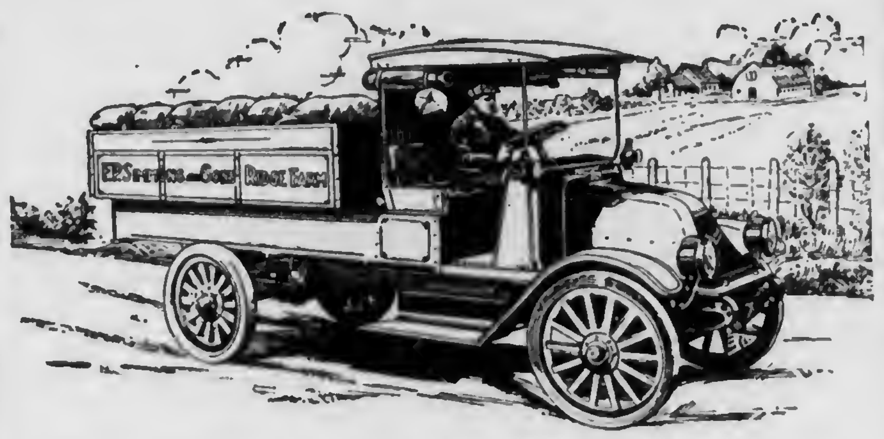
Brittle Hoofs; High Colored Urine.—Have mare that has brittle hoofs, shoes do not seem to stay on well, the hoofs rot. Would like to know if any kind of ointment would toughen them. I also have a horse troubled with thick dark colored urine and I have thought he did not pass enough water. So far as I can tell he is healthy. A. T., Williamstown, N. J.—Apply one part coal-tar and 20 parts wool-fat to brittle hoofs once a day. Standing such a horse in wet clay an hour or two daily will have good effect; besides she should be well fed. Give your other horse a teaspoonful acetate of potash and a tablespoonful cooking soda at dose in feed or in drinking water once a day.

Abscesses. (Boils).—I have a 4-year-old mare which is troubled with boils, has had 5 on top of neck and under collar on shoulder. She is generally speaking out of condition, perspires too freely, has never done any hard work. C. G. T., Hartleton, Pa. —It is perhaps needless for me to say, that her skin and collar should be kept clean. Paint bunches with equal parts tincture of iodine and spirits of camphor, once or twice a day. Give her one half ounce Fowler's Solution at dose in feed or in drinking water 2 or 3 times a day.

Indigestion.—Have cow that is due to soon freshen which seems to have lost her cud, at least she seldom chews her cud. This cow is weak, hardly able to get up alone. P. G. H., Mifflinburg, Pa.—Give her 30 drops fluid extract of nux vomica, ½ ounce fluid extract cinchona, ½ ounce tincture gentian at dose 3 times a day. She should be fed plenty of nutritious food. Feed her well cured corn fodder and hay.

Indigestion.—I have a thoro bred Hampshire sow, about six months old. She does not try to eat but just sucks everything she can get her mouth against. She will lie down and put her nose to another hogs back and just suck all she can. I have looked after her teeth and they seem to be all right. I bought two sows and one male for breeding and of course would like to keep her, if she can be cured. E. S. B., Greencastle, Pa.—Doubtless she has acquired a habit much the same as a cribbing horse. Placing her in a pen where it will be difficult for her to grab hold of anything to suck on and giving her ½ of a teaspoonful cooking soda at dose in each feed, or it can be dissolved in drinking water or swill, will do her good. If she continues the habit of sucking, better not consider her for breeding purposes.

Stocking.—I have a horse 9 years old seemingly in the best of health, but if kept in stable for 2 or 3 days his hind legs stock, but exercise will take it out. Would like to know how to prevent his hind legs from swelling. I. H. Brookton, N. Y.—A work horse should be exercised every day, never fed more than one-third or one-half as much grain or concentrated food as when doing hard work, besides the food for an idle horse should be of a laxative nature. The kidneys should be kept active and there is nothing much less expensive and more effective than acetate of potash, and the dose is from 2 to 4 drams, but for a prompt diuretic effect from one to two ounces can be safely given, but of course should not be often repeated. If the kidneys act fairly free your horse will not stock badly. Bandage hind legs in cotton.



You Wouldn't Make Three Trips

to town to haul farm produce that you could easily handle in one load—it would be a needless and expensive waste of time.

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THE ACCEPTED VETERINARY AND HUMAN REMEDY

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NOT ONLY SEE WHAT OTHERS SAY, BUT SATISFY YOURSELF BY TRYING IT

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It is generally true that an external remedy that is good for the animal is also good for the human body, and **Gombault's Caustic Balsam** is no exception to this rule. In fact, we sincerely believe that there is no liniment or external remedy on the market that is as good or as safe and reliable to apply to the human body as Caustic Balsam. We can safely recommend it in all cases where an external application could benefit. It is also cheaper according to cost because it requires very little and that little is effective.

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Clarence J. Henley, Maplesville, Ala.

Information on special cases freely given. The accepted Human and Veterinary Remedy of the World.

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Have used Gombault's Caustic Balsam for years and wouldn't be without it. It will not only do what is claimed for it, but it is also a sure cure for rattle snake bites, if taken in time. We have saved two horses and one cow with it. Thought you might want to put this in your list of cures, as so many use Caustic Balsam. It might save them a horse or cow some time if they knew about it.

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Caustic Balsam will absolutely remove all poisonous secretions and create a healthy action.

Caustic Balsam Does More Than Claimed for it.

Enclosed please find draft for which send me one dozen bottles of Gombault's Caustic Balsam. I have been using your Caustic Balsam for four or five years and it does more than you claim for it. A neighbor, Mr. Seegar, had a horse with a bad case of sweeny. He could not sell the animal for $25.00. I advised him to use your Caustic Balsam and he did so, curing the horse, and has since refused $100.00 for her. My niece had her knee badly injured by falling from a wagon. The doctors failed to effect a cure and she began using Caustic Balsam. She is now practically well. I have also known it to cure neuralgia and stop tooth-ache. It is one of the finest medicines for man and beast. H. D. Sweasy, Beecher City, Ill.

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E. L. Seltzer, Shelltown, Md.

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I have used Caustic Balsam for the last seven years and found it just as it was recommended, and even more, because it will cure where other medicine fails and I can prove it. I can certainly recommend it. J. T. Sullivan, Chebanse, Ill.

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After using Gombault's Caustic Balsam for twenty years I can say it has never failed to do all you recommend it to do. While it seems high to one that has never tried it, once a customer always one. I have used it for twenty years and use no other but it. W. A. McCauley, Malone, Tex.

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I recommend your Caustic Balsam for any kind of rusty nail or barb wire cut and has also cured bad cases of blood poisoning. I am a veterinarian and surgeon and I recommend to any man this Caustic Balsam as a cure of what I said.

F. Max Scheibe, V.S., Dulce, N. Mex

Gombault's Caustic Balsam

As a Liniment for the Human Body has no Equal

A Liniment that benefits; it kills pain. A home remedy for the Human Family

ALL TESTS prove the wonderful efficiency of **Gombault's Caustic Balsam** in relieving human ailments, such as Rheumatism, Neuralgia, Sprains, Sore Throat, Sore Lungs, Chest Cold, Backache, Lumbago, Diphtheria, all Stiff Joints. It is penetrating, soothing and healing, and for Old Sores, Bruises or Wounds, Felons, External Tumors, Cancers, Boils, Corns or Bunions **Caustic Balsam has no equal. It removes the soreness and strengthens the muscles**—in fact aids all troubles where an external application is necessary. **We would distinctly say to all who buy it that it does not contain a particle of poisonous substance, and therefore no harm can possibly result from its use.**

THIS GREAT REMEDY literally works wonders! It removes bunches on horses and other livestock, thereby increasing the value of the animal fully 50 percent. A successful treatment for Curb, Splint, Sweeny, Capped Hock, Strained Tendons, Founder, Windpuffs, all Skin Diseases or Parasites, Thrush, Diphtheria, Pink Eye, and Lameness from Spavin, Ringbone, and other Bony Tumors; also all obstructions in circulation, and imparts new life and vigor. It is a peerless remedy for all Throat and Bronchial Troubles.

WHY! Because Caustic Balsam can be applied by anyone with safety, will do its work well and in no way injure the horse, while other blisters need daily attention and care and then are liable to leave a blemish.

If you have a lame or unsound horse, YOU CAN WELL AFFORD TO TRY A REMEDY THAT IS SO HIGHLY RECOMMENDED.

Information on special cases freely given on request.

It is FAR SUPERIOR, MORE ECONOMICAL, and a PERFECTLY SAFE, RELIABLE and PROMPT Remedy to use as compared with any other remedy used for like purposes.

The demand is produced strictly by its merits.

IT SUPERSEDES ALL CAUTERY OR FIRING

IMPOSSIBLE TO PRODUCE ANY SCAR OR BLEMISH

IT IS THE SAFEST AND BEST BLISTER

CAREFUL FARMERS USE CAUSTIC BALSAM

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Do you turn your horses out for the winter? If so, we want to call your attention to a very important matter. Horses which have been used steadily at work, either on the farm or road, have quite likely had some strains whereby lameness or enlargements have been caused. Or perhaps new life is needed to be infused into their legs. Gombault's Caustic Balsam, applied as per directions, just as you are turning the horses out, will be of great benefit; and this is the time when it can be used very successfully. One great advantage in using this remedy is that after it is applied it needs no care or attention, but does its work well and at a time when the horse is having a rest. Of course, it can be used with equal success while horses are in the stable, but many people in turning their horses out would use Caustic Balsam if they were reminded of it, and this article is given as a reminder.

Found Nothing That Equals Caustic Balsam

Kindly permit me to express my deep appreciation of Gombault's Caustic Balsam. I have cured sprains, ringbone, strained tendons, sweeny, poll-evil with it in fine shape and do not see how a better liniment could be manufactured. I have used many things for removing puffs from horses but have never found any that would equal Caustic Balsam. I also had a cow that had lump jaw. I used Caustic Balsam and cured it.

John H. Wallgren, Logan, Kansas

Bunches on horses or any other livestock are unsightly.

Caustic Balsam Prevents Blood Poison

We have used Caustic Balsam for several years and have found it to be unequaled for horses or people. My husband ran a rusty nail in his hand and blood poison set in. We used two applications of Caustic Balsam and the swelling and fever left his hand and arm and it healed up without any more bother. It is also as efficient for snake bites and we would not think of being without it.

L. H. Globe, Forest Grove, Mont.

Caustic Balsam is good for that sore feeling after baseball or football games.

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I think your Caustic Balsam a splendid human remedy. We use it for cuts, burns, sores, swellings, sore throat and lameness and find it very beneficial. We expect to keep it on hand ready for any emergency.

Mrs. Robt. B. Newton, Columbus, Miss.

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Worth Its Weight In Gold

I have used Gombault's Caustic Balsam for my own horses and for others, and it has never failed yet. My little girl had rheumatism for a long time. Nothing did her any good until we used Caustic Balsam and she is all right. My wife had throat trouble and used Caustic Balsam with great results. It is worth its weight in gold.

Dr. Ira Le Dunlap, V.S., Rochester, Pa.

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The Lawrence-Williams Co.
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PRICE $1.75 PER BOTTLE AT ALL DRUGGISTS OR SENT BY PARCEL POST.

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PENNSYLVANIA FARMER

AGRICULTURE THE KEYSTONE OF NATIONAL PROSPERITY

ESTABLISHED 1880

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Volume 46 PHILADELPHIA, PA., SATURDAY NOVEMBER 15, 1919 Number 20

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Correct New York styles at prices below the prevailing high standard

YOU can wear exactly the same styles that are seen on some of the most fashionably dressed New Yorkers strolling down Fifth Avenue.

The Charles William Stores have made this possible. They are right in New York City—*the greatest clothing manufacturing center in America*—where they can have their finger-tips on the pulse of the clothing industry every minute.

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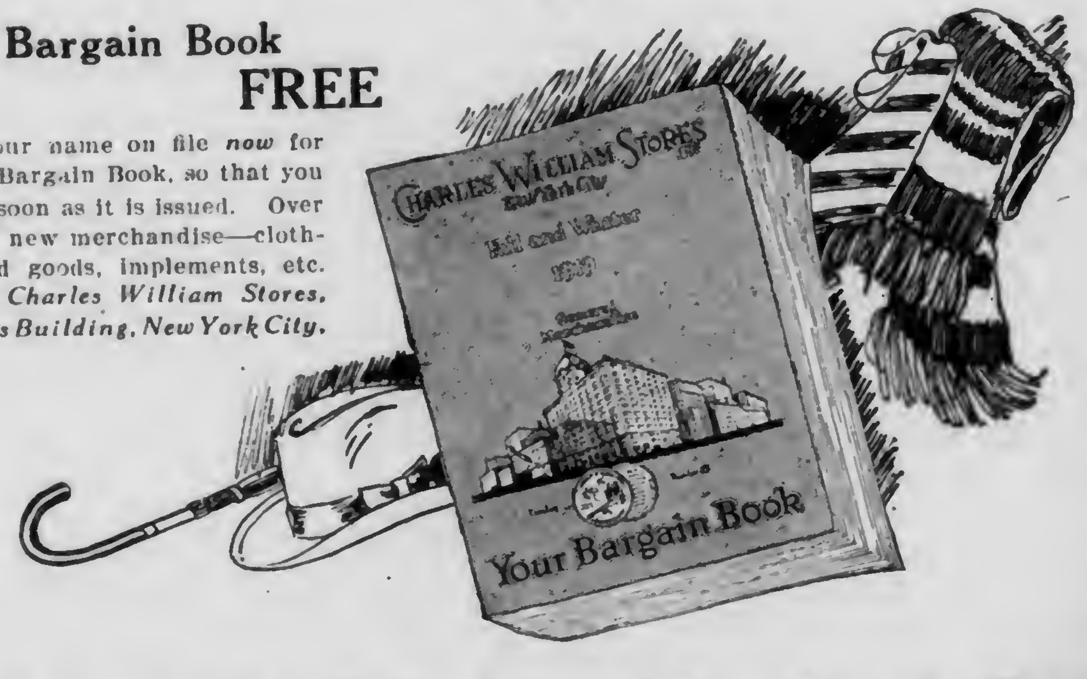

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PENNSYLVANIA FARMER
AGRICULTURE THE KEYSTONE OF NATIONAL PROSPERITY
ESTABLISHED 1880
PUBLISHED WEEKLY

The Lawrence
Publishing Company
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Vol. 46—No. 20. PHILADELPHIA, PA., SATURDAY, NOVEMBER 15, 1919. 75 Cents per Year

Shed Range Method For Dairy Cows

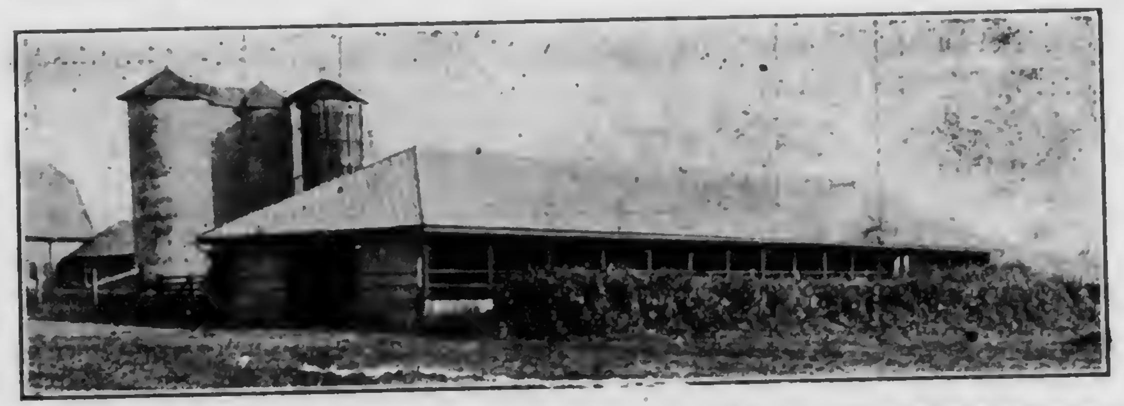
Forced Experience in Wintering Cows Brings Good Results

By HUGH FERGUS

BUTLER COUNTY, PA.

The following system of keeping cows was forced on us rather than being the result of foresight or premeditation, but the results of the system have been so good, and satisfactory that I am passing it along thru these columns for the benefit of others.

A little over three years ago I had to go in debt so heavily for our farm that after horses, machinery and a few cows were purchased, nothing was left to change the equipment of the barn, formerly used as a steer feeding establishment, to that of a dairy barn.

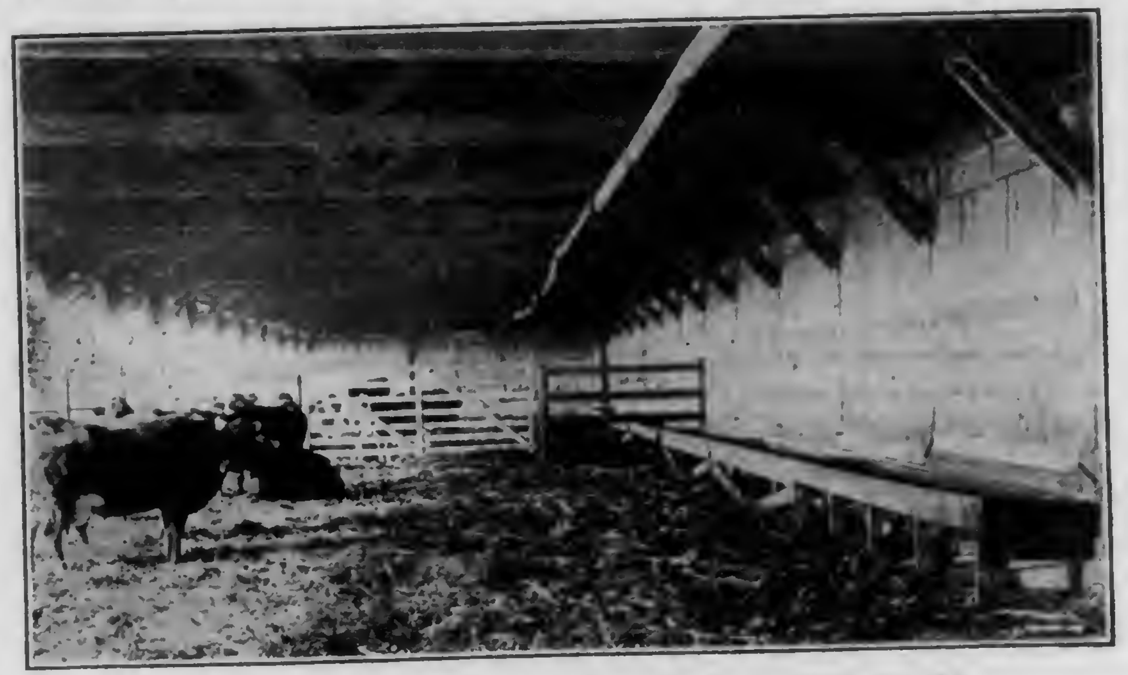


Our barn is about 64 by 64 feet, outside measurement. Half of it, at one time, had been a regular old type, Pennsylvania bank barn, with five stalls in the south end, running across the short way of it for the farm work horses. The remainder of it was divided off for three rows of cows or steers, also running the short way of the barn, with two feed alleys. Then a good many years after the original barn had been build a 32 x 64 feet addition had been built to make the present size. The upstairs part of all the barn is used for hay and straw while the cattle had freedom to run loose in all the lower part of this later addition. There was a feed trough running along the entire length of one of the sides where the cattle were fed hay and silage. There are large doors at each end of it so that a team and spreader can be driven thru it to haul out manure. One of these doors was kept open or partly open at all times so the cattle could go in and out as they pleased into the barn lots for additional exercise and to get water at a trough in the far end of it, three hundred feet from the barn.

This was tho situation we found when we came here. A most excellent one for the keeping of steers, as had been found at many experiment stations, but how it would work for cows I had to find out for myself.

Without capital to equip any part of the barn with stanchions and a concrete floor, I decided to try the steer feeding method of letting them run loose in the 32 x 64 feet newer addition, and fit up the older part with tie chains where I could tie them up while they were being milked. The part where they were running loose was bedded every day, while the milking part of the barn was bedded only occasionally for there was little manure to throw out after they were milked. Fortunately I had an excellent opportunity to compare the system with the one of keeping the cows tied up most of the time during the winter, for the man from whom I purchased most of them kept complete records of his herd. The first year is not a good comparison, because I bought them in the spring and their owner had a silo while I had no silage at that time so their records for that year were below the ones of their former owner. But the next, or second full year, they had ensilage and good hay for roughage. This year they almost all showed an improvement over any previous record they had made for me or their former owner.

The biggest drawback to the system was the fact that one of the large doors, and the north one at that, had to be kept open during the day in order that the cows could go in and out for water to the spring 300 feet from the barn. Here in the northern part of Butler County we have some pretty cold winters, especially winter before last. It was so cold, and the water was so cold, that often the cows would not go for water more than once a day, and even then I am sure did not drink all they should. So last winter I piped the water from a spring above the barn into a trough in one end of the shed where it seldom if ever froze.



Exterior and Interior Views of Open Sheds at Beltsville, Md.

Eleven more windows were added to the six already in this part of the barn and at all times both large doors were kept closed. The first day under this new arrangement the herd averaged an increase of two pounds per cow which they continued to maintain.

Not only does this system show the advantage of increased production but a big saving is made in the handling of the manure. Being able to drive thru this part of the barn with a spreader, the only time the manure is handled by hand is when it is forked into the spreader. With the cattle tramping over it most of the time, the straw, cornstalks and bedding are well packed so that practically no loss is occasioned by fermentation and none from weathering as is the case on so many Pennsylvania farms. We have plenty of straw from about 28 acres of small grain each year, and with the shed bedded down every day the cows go out to pasture in the spring as clean as when they are put in for the winter. Under this system, too, and with an abundance of fresh air supplied, the herd is in excellent health at all times. With the exercise they get it is rarely that a cow goes off feed.

Of course, there are objections but personally I think the advantages so far outweigh them that I would never want to use the other one of keeping the cows tied up most of the winter. One of these disadvantages is the fact that some cows are inclined to be bossy, but if enough roughage is provided this is not a great one. Our cows are all dehorned. If a dairyman is limited in bedding, this is another disadvantage for more bedding is required under the system. Under the system as we first followed it, of leaving a large door open in the day time and the cows having to go outside for water, I believe sudden changes of temperaturo to colder weather caused a heavy drop in production, but since the water was installed in the shed itself and all four sides kept enclosed, cold weather in this climate of cold winters does not cause an appreciable drop in milk flow.

Since I have used this system I have discovered that it is not by any means a new one but has been under experimentation by state colleges and in use by farmers in other parts of the country. On inquiry by the Illinois Experiment Station, 18 farmers in that state who used the open shed stated that the barn, cows and milk were all kept cleaner under the system. In almost every case more bedding was required and the cows showed no tendency to injure one another when all are dehorned. No one fact in connection with the system was so generally emphasized as the labor-saving feature of the open shed.

Some illustrations are shown of the open shed used in an experiment with this system of keeping cows at the U. S. Dairy Division farm near Beltsville, Md., where the north side and both ends were closed by large doors which swung from the top. In summer, the doors were raised to permit the bettter circulation of air. The winters, however, are not so cold as here.

Some Interesting Cost Figures

Strawberries Yield a Greater Labor-Income Than Wheat at Glenview Farm

It is the opinion of a great many farmers that wheat is hardly a paying crop, even at present prices for the grain. In this locality yields are not high, twenty bushels to the acre being considered an average good crop. The rotation used is commonly corn, oats, wheat, hay two years. Most of the farmers keep cows. This year the wheat proposition has been a bad one. The crop was badly damaged by rains during harvest, and in many cases where the crop was gathered before the wet weather, yields were not up to what they should be.

Owing to the wet season, the threshers did not come around until late, in many cases just about sowing time. This piled up the work more than ever, and by the time we had spent two days in threshing a couple of hundred bushels, owing to breakages in the rig, everyone was pretty well disgusted with the crop. For that reason, I was much interested in going over the accounts I kept with six acres of wheat, and in drawing comparisons with a quarter acre of strawberries with which I also had accounts. A man and team can be secured locally for seven dollars a day—thirty cents an hour for the man, and twenty cents for each horse. Land is worth about one hundred dollars an acre. By using these figures, we can arrive at uniform results.

This particular six acres of wheat was sown on ground where a seeding of grass had failed in August during dry weather. The ground was disked lightly, harrowed, and sown during the first week in October, with 250 lbs. per acre of a 4—10 mixture. Timothy was sown at the same time. The wheat looked good right up to harvest, and was put into the barn before the rains. When threshed, it yielded ninety-six bushels, or sixteen to the acre. (The best yield I know of hereabouts this year is twenty bushels. Straw is big, but the heads are short.)

The labor charges against the wheat crop were 25 and ½ hours for man and team disking; 11 hours man and team harrowing; 11 hours man and team sowing, or a total of 47 and ½ hours for man and team. Of this charge only one-half should be charged against the wheat crop which was used as a nurse crop for seeding the hay crop. Hence, we charge the wheat crop with 23 and ¾ hours of man and team work fitting and sowing; 7 hours of man and 10 and ½ hours of team work harvesting (use of third horse of grain binder making up additional team hours); 20 hours of man hire shocking and setting out; 36 hours of man hire and 18 hours of team hire in hauling, mowing, etc.; 20 hours of man hire threshing; 4 hours man hire and 4 hours of team hire hauling, or a total of 11 and ¾ hours of man hire and 56 and ¼ hours of team hire.

The total expense of the wheat crop was man hire and team hire, $55.73; 12 bushels of seed at $2.50 per bushel or $30; fertilizer for six acres at rate of 250 pounds per acre of $44 per ton goods, charging one-half to the wheat crop $16.50; use of land 6 acres at $100 per acre or $36; twine, threshing, board of help $28.98, or a total of $167.21 for the six acres of wheat.

The wheat sold locally at $2.15 per bushel. The crop of 96 bushels selling for $206.40. After deducting the expenses of $167.21 it left a net return of $39.19 for the six acres, or a labor return of $.654 per man per hour.

In addition the wheat crop must be credited with the straw. As a rule, wheat straw is not sold in this section, but used as bedding, so that while it has a value this is not expressed in cash. The returns in the accounts given are a little too high. There is no plowing charged to the wheat, as this went against the August seeding that failed; neither is there a charge for use of equipment, use of barn, interest, insurance, risk, etc. These charges would naturally decrease the net return, as a greater yield would have increased it.

Return per man hour is figured by deducting the cost of man labor from the total cost. The difference between this sum and the total return, divided by the number of man hours, shows what the crop paid for time spent on it.

Strawberries

Strawberries are not grown locally on a commercial scale, except in a few instances. The soil is too heavy and too late for early berries, but if properly handled, the crop will come on after the early fruit is out of the market, and bring a good price. We grow our berries in the modified matted row system, mulch with straw after the ground freezes, and renovate the bed for a second season's picking after the first crop is removed. Half the cost of preparing the land and of the manure is charged to each year. It is no trouble to secure pickers or to find a good local market.

John Nash, a 76-year-old Farmer Feeding a Silage Cutter on his Son's Farm in Luzerne County, Pa. There are Two Silos on the farm and the owner says they are absolutely necessary to successful dairying.

The labor charges against the strawberry crop were hauling and spreading manure 4 hours for man hire and 4 hours for team hire; plowing, disking and harrowng 5 hours for man hire and 5 hours for team hire; digging and setting plants 11 hours for man hire; or a total of 20 hours of man hire and 9 hours of team hire. As the bed is picked two years only one-half of the labor charges should be charged to each crop. Hence, the following figures for the years crop: Fitting and plowing 10 hours of man hire and 4 and ½ hours of team hire; cultivating 6 hours of man hire; hoeing and weeding 20 hours of man hire; mulching and removing mulch 12 hours of man hire and 4 hours of team hire; picking, supervision and selling 52 hours of man hire and 10 hours of team hire, or a total of 100 hours of man hire and 18 and ½ hours of team hire. The plants are dug from an old bed each year, and the only charge made for them against the new bed is the cost of digging them and moving them to the new bed.

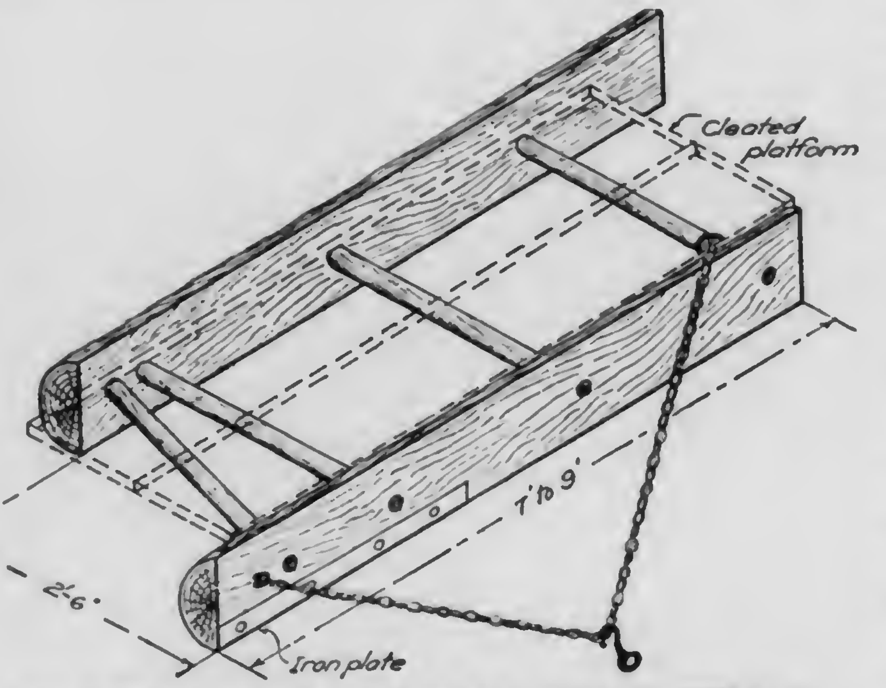
The expenses are 100 hours of man hire and 18 and ½ hours of team hire $37.40; 8 loads of manure at $3.50 (one-half to year's crop) $14; mulch, boxes, picker's charges and use of ¼ acre of land $15.96, or a total of $67.36.

From the one-fourth acre we sold 639 quarts of strawberries at 22 cents per quart or $136.51. After deducting expenses of $67.36 it left a net return of $69.15, or a labor return of $.991 per hour per man.

In comparing the two crops, the strawberries took about as much man labor and a third as much horse labor as the wheat, occupied one-twenty-fourth as much land, and returned nearly twice as much net cash. Of course this was an off year for wheat, and strawberries brought a good price. However, rains at picking time cut down our crop by several crates. The kind of labor involved is another consideration. Wheat requires hard work from man and teams. The ground must be broken and worked in hot weather, when plowing is most difficult; drilling is none too easy on the teams, the harvest comes in the hottest part of the year, and the threshing is a hard disagreeable task. The crop requires large operations, involving large areas of land, two and three horse teams, and plenty of man power. Aside from the fitting of the land, the strawberry crop requires no very hard work from man or horse, in fact, the hoeing and picking can be done entirely by women and children, with proper supervision. Other points to be considered are that wheat requires a considerable outlay for machinery as an investment in cash not necessary for the strawberry. In this locality the strawberry is a pretty certain crop, as the fruit is late, and therefore not so subject to spring frosts. As a last consideration, we plan to take four crops off our strawberry land in three years. Early sweet corn is planted thinly in the rows the year the bed is set; the second year we have our first pick of berries, the next spring comes the second pick, after which the bed is plowed for late Evergreen sweet corn. Altho we got nine big loads of second crop hay off the six acres of wheat stubble this year, it is only rarely that the grass and clover grow sufficiently to furnish more than light pasture, and the wheat crop, plus a pretty good chance for a catch of grass, is all that is to be depended on.

It is not to be argued from the foregoing that the thing to do is to cut out the wheat and grow strawberries. However, it is plain to the most of us that the general crops return a rather low net income per acre. It seems to me that the proper course is to work for better yields of these crops, and to work in such specialties as to fruit and berries, asparagus, some of the truck crops, etc., that yield a high return per acre, wherever this can be done to advantages.

The alternative is to grow the general crops on such a large scale and with the use of labor-saving machinery as will make the income adequate. Here at Glenview we sow about fifteen acres of winter grain. It would not be feasible to increase this amount; but it is entirely possible to put out an acre of strawberries each year, and by a succession of varieties, distribute the labor of picking over several weeks.—R. L. Scharring-Hansen.



PLANS FOR THE KING ROAD DRAG.

INSTRUCTIONS: After each rain drive up one side of the wheel track and down the other side at least once with drag in position to throw the earth to the center. Ride on the drag and haul at an angle of 45°. Gradually widen the strip dragged as the road improves. To round up the road better plow a shallow furrow occasionally each side of the dragged strip and work the loose dirt to the center.

Expense food may be cheap, and cheap food may be expensive. It depends on how much food value it has.

Stories in Farm Law

WHEN IS A PERSON OF AGE?

A. B. BROWN.

Ezra Johnson, who owned the farm adjoining mine, died and left a will giving the farm to his son Arthur, then about 19 years of age, when the latter attained the age of 21. Arthur did not fancy farming at all, and, as I had frequently tried to buy the place from his father, he kept telling me that he would sell me the farm as soon as he was 21 and could give a good deed, in fact, we had the price all agreed on for six or seven months before his 21st birthday.

On the 18th of July Arthur came over early in the morning wearing his Sunday suit and a cheerful smile.

"I'm 21 today," he declared, "and if you're ready we'll go to town and fix up the deed of the place."

"I'm ready any time," I assured him.

"Of course, if you don't happen to have the money today, we can let it stand for a day or two," he suggested.

I had the money in town ready and waiting to close up the transaction, and did not want to take the chance of someone else making him a better offer.

"No, I'll never be any more ready than I am today," I assured him, "and I'll crank up the tin Elizabeth and we'll dodge right in."

An hour later Arthur signed up his deed, I paid over my money, took the deed and placed it on record.

"Do you want to go back home with me?" I queried as I met Arthur on my way from the recording office.

"No, I have some other business to do in town, and I guess I'll stay until tomorrow," he replied.

Arthur's father was as square a man as I ever lived alongside of, and I don't know where Arthur got the dishonest streak in his makeup, but the next day he actually gave another deed to old Bogus Bradley, the money shark in town, Bradley put his deed on record, paid Arthur something for it, no doubt, and Arthur took my money and Bradley's and struck for the west.

The day after he got his deed Bradley called me into his office as I was going by and broke the news to me.

"What if you have got a deed," I told him, "my deed's on record ahead of yours and you don't pull off any of your Bradley tricks this time."

"Yes, but how old was Arthur when he gave you your deed " queried the old hypocrite.

"Why, he was 21, at least that's what he told me," I repled a trifle doubtfully, recollecting suddenly that I had merely taken Arthur's word for it, and had made no effort to find out for myself.

"That's too bad, for the present generation is getting so careless about such matters," sighed Bradley.

"Quit your hedging, you old shark, and come right out and say what you're driving at," I demanded.

"I can do that very easily," was the positive reply. "Arthur Johnson was born on the 18th of July, 1897, as you can easily ascertain at the office of the registrar of births, marriages and deaths, so that he would not be 21 until the 19th day of July in this present year. When you got your deed on the 18th of July Arthur was still under age and your deed isn't worth the paper it is written on, and when I got mine on the 19th and put it on record, it's as good as gold, and you'll oblige me very much by not touching a thing on the farm."

"I suppose you have legal advice on this?" I suggested.

"No, it's so simple that a man don't need advice, all he needs to do is to use his own common-sense," was the reply. "A man doesn't have to be a lawyer to know that if a person is born on the 18th of July, 1918, and still remains twenty during the whole of that day, and isn't twenty-one until after twelve o'clock on the night of the 18th."

It certainly looked as if I were in a deep and dangerous hole dug by my own carelessness, but the fact that Bradley was apparently going on his own hook, without any legal advice, gave me a little encouragement, and as I walked out of his dingy office and slammed the door, I came to a quick decision.

My oldest boy is a third year student in the law school down at the State University, so I decided to take the afternoon train, run down, explain the whole case to him, and see what he would say about it. He says he is delighted to have me send him these little points, and I have always found that his advice was pretty sound for a boy. It was costing me enough to keep him there and here was a chance for him to show whether it was worth the money or not.

A couple of hours later I found him, I am happy to say, digging away in the law library, and in five minutes I had explained the whole case to him. He jumped up, rushed over to a book case, took down a bulky volume and read intently for a few minutes.

"S-tu-n-g," he shouted, and the happy look on his face told me that I was not the one who had undergone that unpleasant operation.

"And I'm all right, then?" I queried.

"Safe as a Democrat in the South," he explained, as he turned to the book again. "Hold on till I read to you.

" 'The rule is well established by the English and American Courts that a person is twenty-one years of age on the first moment of the day preceding the 21st anniversary of his birth. As the Delaware Court has said:—

" 'A person becomes of age on the first instant on the last day of the 21st year next before the anniversary of his birth; thus, if a person were born at any hour on the 1st of January, 1801, even a few minutes before twelve o'clock of the nights of that day, he would be of full age at the first instant on the 31st of December, 1821, altho nearly forty-eight hours before he had actually attained the full age of twenty-one, according to years, days, hours and minutes; because there is not in law in this respect any fraction of a day; and it is the same whether a thing is done upon one moment of the day or another.

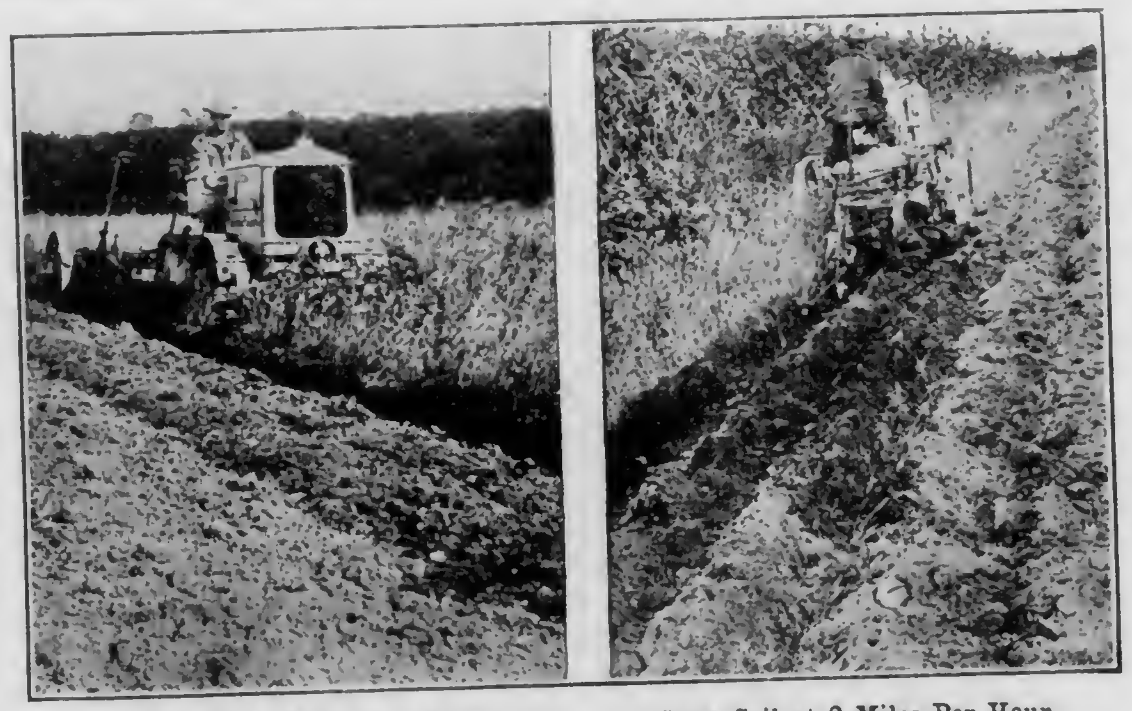
"Old Bradley has certainly overreached himself this time, and Arthur has got some of his good money, so you can go home and worry no more about the matter," John assured me.

I stayed with him about half an hour longer, and then we started for the late train, as I had to be home that night.

"There's just one thing that I'd like to know," John declared on our way to the station.

"What's that?" I asked.

"Whether Arthur Johnson thought he was beating you and practically stealing your money, or whether he had actually found out what the law was, knew that your deed was perfectly good, and knew that he was stinging old Bradley when he took his money. It's certainly a good one on Bradley, however, and as Arthur will give his home town a wide berth for the next twenty years, I suppose we'll never know the real truth of the matter."



Plowing at 3 Miles Per Hour **Same Soil at 2 Miles Per Hour**

These illustrations would indicate that the faster speed does the better job of plowing. The soil is made finer and the trash is covered better. What is your opinion?

Whither Are We Drifting?

When some of us Americans who have lived in this great country for more than a half century look back and realize what we and our fore-father's have gone thru and are compelled today to go about our daily toil almost helpless to do anything to prevent our nation from drifting into a worse condition it is most disheartening.

When oppression became unendurable, our forefathers freed themselves from the British lion at the point of the bayonet. When autocracy in the south sought to maintain slavery in a democratic country it brought on the war of the rebellion; but after shedding rivers of blood, democracy was restored. Then following close on the heels of the rebellion came a young autocracy of capital. Trusts were born and grew into gigantic corporations that absorbed competition, controlled markets, and dominated labor. These corporations went so far as to think they could dominate congress and I am not so sure it was not done in some instances. Laws had to be passed curbing the inroads these gigantic corporations were making in our democracy. Then, labor from its oppression, rose and demanded its rights thru organization. At first the gain was slow, because the organizations were local, and small in numbers. These men saw their only salvation was thru greater organization, hence more organizations were instituted. Then they cooperated to gain their point with more or less success. To make this organization still stronger, they federated during the past years. All this is working on the same old idea that might makes right. When any group or body of people feel they can obtain thru force something for their personal benefit at the expense of the majority, that is tyranny.

As we see and read about the various demands for more wages and shorter hours and realize as farmers our helpless condition because we are not united it makes one feel like asking, whither is our country drifting? Like many of our previous disturbances already aluded to, there seems to be nothing definite being done to stop this craze for more pay with shorter hours. Granting more pay with shorter hours is not curing the trouble, it is only feeding a flame already burning as has already been clearly demonstrated by strike upon strike. No disease was ever cured by treating the effect. To cure you must remove the cause. When that is removed the effect will be removed.

The plea advanced for more pay, is the high cost of living; but as soon as wages are increased, living expenses correspondingly increase and then a further demand is made for more pay. This mode of procedure cures nothing and the whole structure is becoming top heavy. It is not so much the high cost of living, as it is the high cost of loafing. A recent survey among some of our leading industries showed that since the establishment of the 8-hour day, labor was less efficient than formerly. With an 8-hour day and a half holiday on Saturday, the high cost of a good time is greater in many instances than the cost of living, but it is all laid to the high cost of living. Organized city labor has made and set the pace, and country labor is following close in its step and making similar demands.

Now, I am around to the farmer. Where does he get off? The manufacturer adds the labor cost to his product and sells at a profit. The farmer sells in an open market with no consideration whatever as to the cost of production. Even our federal government is trying with night and main to bring down the cost of produce to the consumer without attempting to inquire into the cost of production. Making money plentiful and the necessaries of life scarce will never cure the evil now existing. There is another and worse

(Continued on Page 30.)

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VOLUME 46 NUMBER 20

Our job is to serve our readers. Whenever and wherever we can help you, write us.—The Editors.

Answers to "Bachelor"

NOT in a long time have we had such a flood of letters upon one subject as have been called forth by the article signed "Bachelor," which appeared in our issue of October 25. We printed a number of answers from the girls last week, and others appear on page 20 this week. These are but a part of the number received, but they are representative. They are worth reading because they are the frank expressions of farm girls. So nearly unanimous are they in their reasons that they should furnish food for thought to some parents. We invite a response from boni-fide parents with problems of this kind before them. Are the girls reasonable in their criticism? After we hear from the parents we will probably have something to say. Remember, we are not inviting theorists nor professional writers into this discussion.

Our Relations With Europe

ACCORDING to information brought out at the International Trade Conference in Atlantic City, Europe is dependent upon America for its life and future reconstruction. The Conference committee on Credit and Finance developed these points: 1. Europe is greatly in need of raw material. 2. America's prosperity is bound up in Europe's prosperity, for Europe cannot even pay the interest on the debt she owes us unless she can be restored to production.

This is in line with the report made by Mr. Hoover and other informed business men. It is a business proposition of enormous proportions to be handled in a business way, with credit as the base, and the business men of this nation are taking steps to meet the necessity. Even if we leave the element of humanitarianism out of the question, the matter of self-interest is so great as to make it incumbent upon us to devise ways of furnishing both material and money for the rehabilitation of Europe. It is a wonderful opportunity, to say nothing of duty, for almost every line of industry in this country but one that is not appreciated if judged by the present industrial turmoil and the reduced out-put due to strikes.

Wanted: Thrifty Habits

THE ministers of many churches in every part of the country made an especial appeal on the subject of Thrift on Sunday, November 9. Certainly this is a timely subject and one that should be emphasized from press, pulpit and platform more frequently than we hear it. Altho Americans have always been noted as being spendthrifts, there never was a time when, as a nation, we so fully earned the name as now, nor so completely nullified every principle of Thrift. We are approaching winter with many of our industries closed for the lack of help, due to strikes. The supply of real necessities will soon be exhausted and suffering will be the self-earned portion of thousands of people unless a halt is called at once and people resume normal production and the practice of thrifty habits.

Thrift means more than miserliness in hoarding money. As we understand it, it means: Diligent Earning; Careful Saving, and Wise Spending. Do not the signs indicate that these three principles are at present lacking in the national character of America? Can we hope to succeed individually or collectively without them? These three qualities make a person thrifty, and a nation thrifty.

However, we believe that farmers as a class will generally qualify as thrifty. The very nature of their experience has forced the practice of these three virtus until they have become second nature with them. Moreover, they have less to fear from the rigors of the approaching winter than any other class because their stores are full. Let the others learn. "Experience is a dear school, but fools will learn in no other."

Direct Delivery

THE Department of Labor in commenting upon the cost of living says that products should flow smoothly from land to men. This is a self evident truth, yet one that has not been fully recognized, especially by those who have been doing the carrying. The uneconomical practice of routing produce the longest possible way by rail in order to increase the charge may be a thing of the past, but there are still many short-cuts from farm to consumer that might well be substituted for the more costly and time-consuming methods. The more often produce is loaded and unloaded, the greater is the transportation cost and the greater is the deterioration.

As an example, a picking of tomatoes on a farm 20 miles from Philadelphia were first hauled from the field to the shed; there sorted and loaded in a wagon and taken to the station and unloaded upon the platform; from there loaded into a car, and hauled to the city terminal; from the car they were loaded into a dray and taken to Dock Street to a commission man and unloaded; later a buyer arrived, had them loaded onto his wagon and hauled to his store. After a time they were sold and again loaded onto a delivery wagon and delivered to the consumer. Would you call that "flowing smoothly?" All this work takes time and is expensive; it not only increases the price to the consumer but detracts from the price to the grower. In these days of good roads and efficient vehicles it is a matter of economy to haul direct from farm to market. If the farm is not big enough to afford a motor truck, let several club together; and in that way reduce expense and save time.

Chicago Milk Producers Acquitted

DAIRY farmers everywhere will be interested to learn that at the end of seven weeks' trial the officers of the Chicago Milk Producers' Association have been acquitted of the charge of unlawfully conspiring to fix Chicgo milk prices and eliminate competition. For three weeks these men who dared to conduct the fight of 16,000 dairymen for a living price for their product have been denounced and defamed by assistants from the state attorney's office. Every prejudice of the jury was appealed to and every effort possible made to prevent the defense from making a fair interpretation of the milk producing business. In closing the case the prosecution asked penal sentences—declaring fines to be inadequate punishment for profiteers and vultures who piled up huge profits during the war period by robbing the public and starving city babies.

Chas. S. Deneen, former governor of Illinois, conducted the case for the indicted officers. Mr. Deneen showed that the prices were fair and altogether necessary to maintain adequate milk production to meet the requirements of the city of Chicago. He showed the honesty and integrity of the members of the association by fulfilling their contracts for six months when costs were soaring so rapidly that they were losing heavily. He also showed that the defendants have already suffered severe financial losses, and that they were not asking city consumers to make good any such losses, but simply asking a fair price for their product. He declared that such an indictment as charged against the defendants could not be made since the collective bargaining act of July 1, 1919 went into effect.

The verdict is the fourth victory for organized dairy farmers in legal battles. The principle for which they have all fought, and which they have established is that co-operative price agreement is vital to the business of producing market milk. The future of dairy farming in America is improved by the outcome of these four trials—in Minnesota, California, Ohio and Illinois.

Farm Cost Accounting

IN all agricultural undertakings there is a constant, endless change that is using up the capital invested in the original enterprise; and reviving dead capital in agriculture is no easy problem as many young men who have left unproductive farms will tesify. It requires skillful management to keep the capital invested in farming alive. But few kinds of business use up their capital faster than farming. Land, buildings, fences, improvements, equipment and machinery depreciate rapidly and new capital must constantly be put into the business to keep it alive. The best of live stock will soon depreciate and the capital therein will be reduced to a vanishing point unless the animals are handled with skill. The man who invests his money in a farm because he thinks the investment a safe one is pretty sure to come to a realization of the fact that there is not always a "pot at the end of the rainbow."

Deterioration of soil fertility will cause capital invested in land to disappear in a few generations, and some soil experts tell us that at the present rate we are drawing on our fertility account it will be used up in thirty years, or left in such a condition that growing profitable crops will be impossible. It requires a vast amount of energy, time and money to make a soil productive and maintain such a condition for a series of years. Crop-yielding power is capital, and like other forms it dies, if not doctored and nursed. Orchards and vineyards die. We place high value upon good fruit plantations, yet with the lack of care they will die out and in a few years become unprofitable. Other factors such as market demands for new varietes may enter into the situation and wipe out a large portion of the capital. Even Federal Land Banks hesitate in regard to loaning thirty percent of the present valuation on fruit farms.

We mention these facts merely to show how much of the apparent prosperity of the farmer is due to the fact that he has been cashing in his capital stock by the deterioration of fertility, fences, improvements, equipment, machinery, buildings and the like, rather than reinvesting his earnings in the business. The farmer, like other business men, has been unnerved by the uncertainties of the business outlook, and is awaiting the leveling of prices before making purchases to increase the efficiency of his business.

A careful study of the problem of farm capitalization brings up the great question of farm economy in producing and marketing various products. A great wave of interest in farm cost accounting is sweeping the country. At the present prices of farm land, labor, seeds, fertilizers, equipment and machinery, farmers are beginning to question seriously the profit from some of the investments they have been making. The cost of production plus a reasonable profit, so prominent during the period of the war, has stimulated a desire on the part of farmers to know more about their business. Then, too, the advent of the tractor and other labor-saving machinery has prompted many men to want to know just what can be saved in carrying on farm work. Every new invention to replace labor and horse-power on the farm creates a hunger for accurate cost-of-production figures. It is admittedly difficult to figure a generous interest return on capital invested in farming. This, of itself, is driving ambitious farmers to keep accounts, so as to eliminate wasteful methods. The young man who is trying to pay for land from its products finds it necessary to figure closely. We may expect some great results from cost accounting systems in the near future. It will be a great achievement, this putting agriculture on a more stable cost accounting basis. It will increase the reward for efficient management and put careful farmers above the average.

HARRISBURG LETTER

Need of Understanding.—Altho Governor William C. Sproul drove home the fact that the farmer has not struck, and various other speakers pointed out that the man on the farm was not to be blamed for any profiteering, there was apparent need at the "fair price" conference in this city on Thursday for a better understanding. In fact, some men thought that thru the work of the various war organizations and the newspapers that the position of the man who tills the soil and raises the crops was better comprehended than was manifest on Thursday. Some heads of cities, who were not talking for political effect, made statements in which they blamed the farmer and carefully avoided referring to the effect of the wage jumping and hour cutting that has been demanded and secured by organized labor. The mayor of one of the cities in an industrial section devoted his speech to assailing farmers and another wanted to know why they did not come into the cities with their wagons as they used to do. Secretary of Agriculture Rasmussen in his speech made some suggestions as to the work needed to be done to get the market service properly organized, and John A. McSparran presented an array of figures that showed that somewhere along the line people were making money out of wheat and corn and other things that left farms at stated prices. The governor and Attorney General Palmer both urged that the people of the State take pains to reach an understanding with the producer and that they take the steps needed to eliminate the intermediary costs. Where possible, suggested speakers, there should be a direct contact between farmer and housekeeper and an understanding of the problems by each. Too many people are letting the other fellow do it and buying from stores when they could get into touch with a farmer by telephone and drive out to his place and save money.

Administration Unruffled.— The State administration seems to have been untouched by the elections of last week. In most instances men connected with the administration won in their home communities and the result has been that it has been put into a position seldom occupied by administrations at this time. The test of an administration is always when its second legislative session meets and thus far the Sproul tenure of office has caused little of the dissatisfaction noted at this period in some former administrations. Notwithstanding many bitter local fights there was little that could be connected with the State administration brought into the campaign. While this is all rosy and a cause for congratulation and flattery about the Capitol it is to be noted that the governor is maintaining an even course and that he has not been ruffled either by what has happened or by prospects of a future on the Potomac instead of on the Susquehanna. The chief business which now seems to be in hand here is the continuation of changes for efficiency in the departments from time to time in a quiet way instead of as horrible examples or political warnings and the launching of the revision of the constitution. The commission to take charge of this work is to be named within a day or so.

The Forestry Situation.—The plan for putting the State Forestry Deparment on a new business basis is going along with occasional stops. There have been several moves made in the last few years to improve the administration and recently a general scheme for changing things was presented which aroused opposition. As a result there is now an issue between Commissioners Pinchot and Shoemaker on one hand, and Conklin on the other in regard to cutting of forests. One result has been that some famous tracts of timber have been saved for State parks and that there will be more established later. Standard contracts for cutting will be made and the question of cutting without appoval of the commission will also come up for determination.

The Grain Yields.—Some studies made of the grain crops the last month or so have shown odd results, according to State Agricultural officials. In the big wheat counties, the ravages of the moth, the rust and similar pests have caused a reduction of the yield per acre while in counties where small tracts and intensive cultivation have been tried as a general proposition there is a good yield. The fact stands out that wheat was grown more extensively last season than ever before and that weather and pests prevented a crop that would have been remarkable.

More For Support.—According to information which Governor William C. Sproul is assembling Pennsylvania is now raising a larger percentage of food for its own support than ever before and that, too, in the face of increasing population and industrial facilities. The variety is greater and, thanks to the war, the interest of people in cities and towns turned toward gardening helped give some idea of what was needed to keep a farm producing.

The Employment Situation.—The State is closing up employment agencies because it has been found conditions are so abnormal that the regular established agencies can handle what is needed. In some communities where industrial conditions have interfered with regularity of work an effort has been made to get farm-bred people to go back to the land. Some farmers have benefitted thru this move, but unless it is taken up generally it will not be of the value hoped.

The Institute Plan.—There is little criticism against the plan for conducting farmers institutes from month to month instead of laying out an iron-clad schedule for a whole season. The Department of Agriculture has arranged for the first institutes to be held in the first week of December and to stop them in Christmas week and resume in January. The programs are now being worked out and Secretary Rasmussen says that they will be on a basis of answering questions and of meeting the needs of localities instead of shooting into the wide, blue sky.

The Dog Law.—One of the things which will probably come to the front during the institutes will be the dog law. There appears to be some difference between State and County authorities as to which should do the most toward enforcing it and while the fiddle faddling is going on sheep, are being killed. State officials are reluctant to go into counties and take hold of such matters unless an emergency exists, and yet there are very definite situations now prevailing wherein some energy on the part of constables could get things started.—Hamilton, Harrisburg, Nov. 10, 1919.

NEW YORK LETTER

A Library For Louvain.—This state is proud of the gracious act of Dr. Jacob Gould Schurman, president of Cornell University and one of the most brilliant students of philosophy in America, in presenting his entire philosophical library of rare and priceless volumes as a foundation for rebuilding that destroyed by the Germans in the University of Louvain.

Loss of Valuable Cattle.—Forty blooded Ayrshire cattle perished when five big barns burned near Malone this week. The loss was over $25,000. The attention of farmers has been called to the fact that most of them need to double their insurance on buildings since lumber and other building materials have advanced so markedly. Too many buildings are not protected, the insurance now carried not being one third or one quarter of the cost it would be to replace them today.

Wheat and Sugar Conditions.—Local millers and bakers predict a 20 cent loaf of bread and an advance of $2 or more per barrel in flour when governmental wheat supervision is suspended. The sugar shortage is more stringent than ever.

One-Sided Teaching System For Schools.—A noted educator, Dean Penny of the Teachers' College, Syracuse University, at a gathering of rural school teachers condemned the educational system of the state this week, saying that educational theories as given to teachers for use today are too one-sided and not in keeping with the results desired for rural pupils. He scored the constant "butting in" or interference of rural district superintendents, who destroy the teacher's individuality. The rural sentiment is growing fast that something must be done to make our schools more efficient and consolidation, with more available Junior High School departments seems to be one solution.

Reforestation Interest. — Eight counties of Northern New York are to reforest large unprofitable tracts, and many municipalities are planning to plant forests for their future income. Southern counties also Chenango and Otsego Counties are planning extensive tree planting.

State Troopers.—In a recent examination to make twelve appointments to the rural police forces of the state over 200 applicants appeared. State troopers were recently sent to Holley to relieve the sheep situation there where dogs are doing very destructive work among the flocks.

Prevention and Cure of Tuberculosis.—Very prominent officials, headed by Governor Alfred E. Smith will push the coming Christmas sale of Red Cross seals, and the campaign to raise $582,000 for the purpose of stamping out tuberculosis in the state outside of New York City. The death rate for this disease has increased from 115 to 126 per 100,000 living persons in this state since 1916, due to influenza and war conditions. This is the highest rate in ten years. The Governor has appointed county heads of the campaign and the people are being urged to buy generously of the seals. Eighty percent of such moneys will be used in the counties contributing. The Governor will serve as chairman of the state campaign and the county chairmen will constitute the state committee. The employment of county nurses is one big help in eradicating this disease and counties are urged to look after their own health conditions in this way.

Election Notes.—This was the quietest general election ever known in the state in most sections. As there was little competition and few state officers to be elected. It is too early as yet to see how the farms will be represented in the coming legislature. Several farmer legislators whose services have proven very valuable, were re-elected. One such refused the nomination because the salary of $1500 did not cover the expense it has been to him in the past two years to leave the management of his valuable farm to hired help while he was in Albany.

Wants Potato Tariff.—The New York State Potato Growers' Association has petitioned Congress for an import duty of 50 cents per bushel on potatoes and to raise the proposed duty of 1½ cents a pound on potato starch to 3 cents. The Association says the margin of profit in growing potatoes is now so small that the permanency of the crop is threatened. The expense of growing is now so high that the industry will not stand competiion from Japan, Holland and Germany.

Home Bureau Work.—At a state conference last week of Home Bureau agents and assistants, and members of Advising Councils of the 25 Home Bureaus of the State, this state led all others in organizing its forces. The agents of the State formed an organization, electing Miss Vera McRae, the agent of Cortland as president and Miss Mary Bowen of Onondaga County as secretary-treasurer. Mrs. A. E. Brigden of Cortland County was elected president of the members' association. This work is expanding very rapidly in this state, even tho federal funds are cut down. The women's clubs are signing petitions to their supervisors, the men are endorsing the work done by the clubs, and in some cases petitions signed by men are going to the supervisors and the latter are being interviewed by the women and asked to support appropriations to carry on and develop the work, as a work which returns much that can't be estimated as to its value to farm life.

Junior Club Supervision.—This state is glad to learn that O. F. Benson, the father of the club idea has given up his work as the head of the federal program of Junior club work and is to take charge of such work in the Eastern and middle Atlantic States. His residence will be in Springfield, Mass. This means putting this work over here as it never was before. The Eastern States Educational and Industrial League has raised a fund of $250,000 as a starter for this work. There are now 12,000 paid leaders of this work in this country and 2,000,000 club members.

Conserving Coal.—Coal has been seized in railroad yards of the state and many trains are being discontinued as a means of saving coal. The rural people who have no wood or no stock of coal ahead seem to be worse off than others as city dealers refuse them coal until the city customers are supplied.

Auto Fees Raised.—No four cylinder car in 1920 will pay a license fee of less than $5 and no six cylinder less than $10. A new law goes into effect with the new year, making the age and the list price of the car a basis of part of the full fee. It calls for 40 cents on each $100 or motor fraction on cars up to three years old 20 cents if 4 to 5 years old, and 10 cents if over 5 years old, in addition to the regular fee.

Real Estate Lively.—The real estate transactions of Cortland County this year are double what they were in 1918, or 3,140 as compared to 1,720. Here the regular force in the county clerk's office has been able to keep up with the work of handling the papers. But in Onondaga County, where the real estate transfers have also doubled two extra clerks have had to be added to the office force in order to keep up with the work. One man who has watched values and conditions for years says that tho we consider real estate prices high here now they are far less than in the west and middle west and that ten years' time will see our present prices doubled.

Milk Drivers Strike Averted.—Governor Smith put in an appearance at the meeting when the milk drivers of New York City expected to go on strike, and succeeded in holding up their plans, promising them a fair deal. He had previously told distributors they must continue negotiations with the drivers and placed at their service the state labor board. The strike would have affected areas as far north as Albany, and extended into Passaic and Jersey City. The milk conference board seems very unwilling to compromise or conciliate. The newly proposed prices to drivers is $35 a week with 2 percent of collections; clerks $22 with a 2 percent; all other inside help $30. There are many thousands of these workers who had determined to strike.

NEW JERSEY NEWS

Students Hold Annual Contests.—All of the schools of Pennington took an active part in the annual industrial and agricultural contests held during the week in the public school building at Pennington. The events were very successful and featured by a large attendance of interested persons from all parts of Mercer County. The First National Bank of Princeton, gave $15 as cash prizes for the best corn, potatoes, apples, canning, baking, chair caning, woodwork, poultry, sewing and home garden exhibits by schools and poster work. All of the exhibits were the work of the pupils of Pennington township. "Effect of the War on Farming in Europe" was the subject of an address by Dr. Jacob G. Lipman, of the State Agricultural College.

Fruit Prices Decrease.—Owing to great scarcity of sugar in this state such fruits as lemons, apples, grapefruit, pears, oranges are being sold at much lower prices than a month or so ago. These fruits are not being disposed of in quantities as formerly because the consumer cannot obtain the sugar to use with them. Honey Dew cantaloupes are about out of the market, and bananas are higher in price than usual. There is a good supply of squash. Pumpkins are not selling as heavily as this time last year, also owing to the lack of sugar for making pies.

Pennsylvania Farm Agent In Jersey.—W. S. Barnhart has succceeded Frank A. Carroll, as County Agricultural agent of Mercer Conny. He was born and raised on a successful stock farm in the Western part of Pennsylvania, and is a graduate of the Pennsylvania State College. Since graduation he had charge of a Pennsylvania Agricultural High School for three years, and went from that position to Alfred University as head of the Department of Animal Husbandry and Dairy Industry. Mr. Barnhart has performed considerable extension work in Pennsylvania and New York States.

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HORTICULTURE

LESSONS FROM THE 1919 APPLE HARVEST

By J. P. STEWART

Now that the apple harvest for 1919 is largely or entirely over, the next step is to get the orchard into ship-shape for winter and incidentally decide on the basis of current experience, as to what additional trees should be planted, if you can get them.

Taking up the second part of this program first and basing our remarks on conditions in the general Cumberland Valley area, I would say that the varieties which have turned in the most profit per acre this year have been the Yellow Transparent, Grimes, Jonathan, Stayman, and Blacktwig. The Yorks have generally borne well and have doubtless brought in by far the greatest total returns in the area under consideration, but unless one happened to sell his crop early,—on the first big wave of buying that came thru the Valley,—his price per barrel was likely to be relatively low on this variety.

The Blacktwigs have furnished the surprise of the season in general performance. This variety has the reputation of shy-bearing, susceptibility to scab, and of being in only moderate demand on the market, altho it is one of the latest keepers of the winesap group. This season, however, it has frequently greatly outborne the Stayman right alongside; where properly sprayed it has been kept fully as free from scab as the Stayman; and the current prices for the Twigs are running fully as high as for Stayman. In one limited area, for example, the current sales from Blacktwigs, only nine years old, have averaged upwards of $400 an acre this year.

Notwithstanding this fact, I would not care to plan any of this variety in any new orchard of my own at the present time. The Stayman has nearly all the good qualities which the Blacktwig has, and is of considerably higher dessert quality, so that it will generally move much more readily on a dull market. The other three varieties mentioned above might well be planted, however, wherever the conditions are suitable, and they are likely to make their owner as much money as anything that he could select. I would go heaviest on the Stayman and Grimes, however, in the greater part of Southern Pennsylvania at least, and unless the acreage was rather large or the market close at hand, I would confine the commercial planting very largely to those two varieties. The Grimes of course might show a considerable loss from crown blight in the later years, but this can probably be greatly reduced by proper precautions.

In the writer's opinion, these precautions consist chiefly in reducing the French seedling root commonly used in propagation to as small proportions as possible, and then doing the "worming" of the trees outside of the period during which the trees are susceptible to infection by the fire-blight organism. If we are correct in the first part of this proposition, then the best Grimes tree to buy is one propagated on the smallest piece-root available, or else one propagated either on its own roots or on strictly American seedling stock. This idea apparently has not reached the nursery trade to any important extent, so that such stock may be difficult to buy, and it also should have more definite experimental proof than is available at present before we can make any definite requirements of nurserymen in this regard. The circumstantial evidence, however, is sufficient to give such stock the distinct preference where it is obtainable, in my opinion.

Another important early variety for consideration in new plantings is the Duchess, or more properly, the Oldenburg. It isn't much for quality but its size, earliness, and generally attractive appearance make it a very close competitor with the Yellow Transparent and in many localities it excels the latter regularly in net profits. The Rome and also the Stark are worthy of much consideration for late sorts, but they could hardly displace any of the varieties just named for profit, and hence would only come in to supplement them in the larger plantings.

Some people make a big mistake in picking both the Stayman and Blacktwig too early. Both these varieties hang on very well under normal conditions, and as a rule should not be picked for at least a week after the York Imperial. This year about three weeks after the Yorks was just about right for the Twigs. When these varieties are picked too green they are much more likely to scald, the Staymans remain gray instead of becoming the

(Continued on Page 15).

HORTICULTURAL SOCIETY MEETING

The twenty-third annual meeting of the Maryland State Horticultural Society was held at Hagerstown, Md., October 28th-29th, 1919, in conjunction with the Maryland Agricultural Society and the Farmers' National Congress.

The principal speaker on Tuesday's program was Prof. S. S. Beach of Ames, Iowa, who presented the Future of the Fruit Industry. Among other things, he pointed out that the fruit growers are not asking for five hours a day or for time and a half overtime and double time on Sundays. They are not stopping production to scrap and quarrel over conditions but are working steadily along from morning until night and doing their duty at this time in the history of our country. Prof. Beach then pointed out that the future of the fruit industry was brighter than ever before and showed by careful analysis the possibilities of the industry.

Prof. E. N. Cory, of the State College, reported on Dusting and Spraying investigations. This called forth considerable discussion on the part of a number of leading growers.

Prof. E. C. Auchter, of the State College, discussed the results of pruning investigations which he had conducted in West Virginia and which he stated were applicable to Maryland conditions.

The Wednesday morning session was given over to a joint meeting with the Farm Implement Dealers.

The session was well attended and a great deal of interest was manifested.

The chief topic of the afternoon meeting was a discussion of the standardization of fruit packages. W. J. Peebles, Perishable Traffic Agent of the U. S. Railroad Administration discussed the subject from the transportation view-point. Mr. R. G. Williams, President of the Fruit Package Manufacturing Association presented the manufacturer's side of the question and Mr. F. P. Downing of the Bureau of Markets, U. S. Department of Agriculture, explained the attitude of the Federal Department and urged that measures be taken to support their efforts in benefitting the fruit grower. A resolution was passed by the society approving the proposed legislation providing for the standardization of Basket Hampers, round stave baskets, splint baskets and the establishment of a standard box for apples.

Prof. A. S. Thurston of the State College, discussing commercial floriculture, emphasized the necessity of more complete courses of training in our educational institutions.

The following officers were elected for the coming year: President, Mr. A. P. Snader; Vice-President, Mr. C. E. Bryan; Secretary-Treasurer, S. B. Shaw.

Members of the Executive Committee, J. Andrew Cohill, C. P. Whiteford, Jas. W. Boone.—S. B. S.

WINTER STORAGE OF ROOT CROPS FOR HOME USE

Vegetables in a Barrel Pit

The root crops such as beets, carrots, turnips and cabbage must be stored in a cool moist atmosphere. House cellars which contain a furnace are unfit for the storage of these crops. The ordinary pit is very good but a barrel pit is much more convenient to get into, especially where a few roots are to be used every few days.

A strong (flour) barrel is laid upon a scooped out place in the ground so that the lower side of the barrel is about twelve inches below the level surface of the ground. A three inch layer of straw, hay or leaves is placed around the outside of the barrel and a few inches of soil is thrown over the layer of litter. The roots are placed into the barrel so that it will be perfectly convenient to get a few of each kind when the pit is opened. For a few weeks the thin layer of litter and soil over the barrel is sufficient to protect the contents from freezing. However, when cold weather sets in, it will be advisable to add a second layer of litter and dirt. The end of the barrel is kept closed with a six-inch layer of litter during mild weather. However, when severe is expected, it is advisable to add an extra covering of soil or litter.

In the vicinity of Philadelphia, beets and cabbage are gathered early in November while carrots and turnips are better if they are not harvested until late.—R. W. DeBaun.

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They are imperative in cold weather for the hundreds of thousands of cars that do not have priming cups, and are infinitely better for those that do, because priming cups let the gas in too far from the spark plug. Every car can be easily equipped with these plugs in a few minutes.

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5 cows, 2 yearlings, mower, roller, 3 plows, long list tools, wagons, harness included for quick sale. On main road, 2½ miles depot, high school, milk station, 7 miles large city. Easily worked, productive fields, 10-cow, wire-fenced pasture, estimated 1,000 cords wood, nice apple orchard, pears, plums, cherries, 8-room house good condition, barn, garage, poultry houses, &c. $2300, part cash, gets all. Details page 28 Strout's Fall Catalog, 100 pages Farm Bargains 23 States; copy free. STROUT FARM AGENCY, 1422 B E. Land Title Bldg., Philadelphia.

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Ubiko Stock Feed. A balanced carbohydrate ration. Builds flesh and strength. Makes healthy horses, mules, sheep, and hogs. Made of hominy, oat feed, wheat bran, middlings, ground barley, linseed meal and salt.

Ubiko Buttermilk Egg Mash. Makes eggs in abundance because it contains all the essentials in the correct proportion. An excellent mash.

Ubiko Buttermilk Growing Mash. Little chicks soon become big chicks on this ration—it makes them strong and keeps them healthy. 15 per cent protein.

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Let us send you milk and egg record sheets on which to keep track of your costs.

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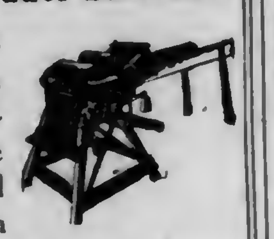
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Cow HEALTH is as Important as Good Feeding

When a cow's milk yield falls off, it is more likely to be a question of health than of food. Over-feeding will only make matters worse. Milk cows are subject to impairment of digestive and genital organs and the milk production is immediately reduced.

These vital organs can be toned up and strengthened by feeding KOW-KURE, the great cow medicine. This remedy is also used in treating such ailments as Abortion, Barrenness, Retained Afterbirth, Scouring, Bunches and Milk Fever. The best dairymen keep it constantly on hand. Sold by feed dealers and druggists; 60c and $1.20.

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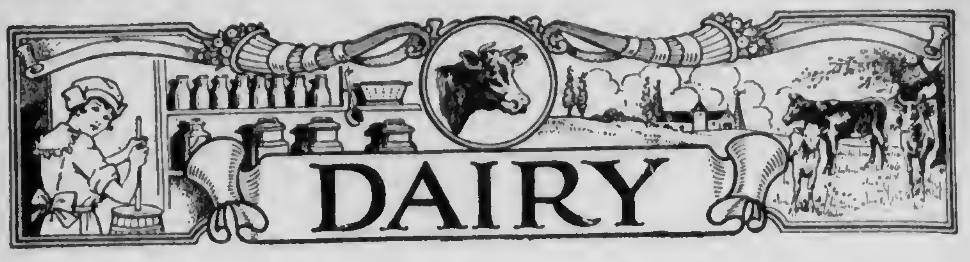

DAIRY

INTER-STATE MILK PRODUCERS' MEETING

The Inter-State Milk Producers' Association has announced the following program for its Third Annual Meeting to be held at the Continental Hotel, 9th and Chestnut Streets, Philadelphia, Monday and Tuesday, December 1st, and 2nd.

December 1, 1919, 10 A. M. Election, Reports of Secretary, Treasurer and Auditors, Address of President Willits. The new selling plan explained at the afternoon session. M. D. Campbell, President of National Federation of Milk Producers. will tell you about the part of Agriculture in the reconstruction; Hon. Fred. Rasmussen, Secretary of Agriculture for Pennsylvania will discuss the "Outlook for the American Dairyman." At 6.30 P. M. sharp comes the banquet and short addresses around the tables by E. J. Cattell, one of the greatest after dinner orators in America, a number of our own members, and others. Plenty of music and a good time.

The second day's session beginning at 8 A. M., December 2, will consist of personally conducted tours to the Philadelphia milk platform and thru the bottling plants of the larger dealers . At 10.30 A. M. Prof. Alva Agee, of the New Jersey Experiment Station, will discuss "Cooperation by Producers." Dr. King and others are on the program for addresses. At 2 P. M. Prof. A. A. Borland, of Pennsylvania State College will discuss "Improved Milk Production, the Responsibility of the Individual." After Mr. Borland's address a general discussion and Question Box will follow.

This is the first time that plans have been made for more than one day. The great variety of problems now before organized farmers and particularly before dairymen demand free and frank discussion and this program will afford enlarged opportunity for the Association members to get together, behind broad construction policies.

The officers will of course report fully on development in the Philadelphia territory. Mr. Campbell is known from coast to coast as a stirring speaker who stands for the enduring fundimental principles of American democracy. On Tuesday, December second, the consumer's organizations of the city will be invited to hear Prof. Agee discuss Cooperation for Producers' Association, economic advantage to the public. Prof. Borland, the new head of the Dairy Husbandry Department, State College is very popular with Pennsylvania Dairymen. His topic was selected by the officers of the Association because they have been impressed by their experience with the importance of each dairyman, realizing not only the value of his organizations to him, but also the importance of economic individual production and better dairy methods as an asset to the organization. Everybody gives Secretary Rasmussen the glad hand when he appears in Philadelphia and they always have something worth while to take home with them when he sits down.

The banquet is a new departure for the Association but should become a very popular feature because of the opportunities offered for closer personal contract between representatives from the various counties covered by the Association and for a free exchange of ideas. Our farmers get none too many of such informal gatherings. The important speakers will also be at this supper to meet the members and discuss any personal problems with them. The Association is to be congratulated on being able to announce such a conference. All sessions, save the one on Monday morning, are open to the pubic and should be widely attended.

Anselica N. DeKol 3d. Weight, 1780 lbs. 119 lbs. milk in one day; 24 lbs. Butter in 7 days

SHORT COURSE FOR COW TESTERS

The Dairy Department announces that a special short-course for testers will be given at the Pennsylvania State College from November 11 to 20 inclusive. Recently a great demand for qualified cow-testers has arisen thruout the state. Apparently there are not enough to go 'round. County agents are constantly asking for men to do the testing in new associations formed by dairymen to find out which are the "boarder cows." More cow-testing associations were established in Pennsylvania last year than during any previous year, but the number was limited by the number of testers available. In many sections farmers are anxious to form cow-testing associations, but are unable to do so because they cannot get the men to do testing. The short-course offered by the Pennsylvania State College is to meet this demand. It will benefit both the men who take the course and the farmers who desire to organize cow-testing associations, for it is planned to fit men for just this kind of work.

NEW MILK TESTING LAW

One of the important laws passed by the last session of the Legislature is that providing for the supervision of all milk plants where milk and cream are purchased or sold on the butterfat basis.

The Secretary of Agriculture is charged with the supervision of this law which provides for the issuing of all permits to all such establishments for the purpose of record, and for the issuing of licenses to all testers employed for such service after they have passed a satisfactory examination of proficiency conducted by the Department of Dairy Husbandry of the Pennsylvania State College, and furnished evidence of good character. These licenses must be posted in plain view in the testing room. Plans for joint work are now being formulated by the Department of Agriculture and the Pennsylvania State College.

Permits and licenses are issued for one calendar year, and must be renewed annually. The Secretary of Agriculture has authority to revoke both permits and licenses for cause.

The permits are issued without charge to the milk plants, but an examination fee of $3 is charged by the Pennsylvania State College to all applicants for the position of testing, and a fee of $2 is charged by the Pennsylvania Department of Agriculture for issuing the license.

All examinations will be certified to the Department of Agriculture by Pennsylvania State College before licenses are issued. Provision is also made for checkwork by State Testers under the direction of the Secretary of Agriculture who will, from time to time, check the work of local testers.

Provision is also made for the inspection and approval by the Bureau of Standards of the Department of Internal Affairs, of all glassware used in testing.

This law assures both producer and dealer of a square deal, and will in a great measure relieve the accusation of faulty testing.

REPORT OF THE CLINTON CO., PA. COW TESTING ASSOCIATION

During the month of October there were 376 cows tested in the association, which is the largest number since the association was organized. about six months ago. The following men had cows which gave over forty pounds of butterfat during October:

T. C. Kryder, 1; Geo. Gummo, 1; C. E. Wells, 1; J. W. Kiester, 3; C. W. Taylor 1; J. M. Frankenberger, 1; C. W. Gramley, 1; C. D. Getz, 1; Roy M. Hanna, 3.

The following men had cows producing over 1,000 pounds of milk:

T C. Kryder, 3; Geo. Gummo, 1; R. H. Harris, 1; J. G. Nolan, 2; C. E. Wells, 2; J. W. Kiester, 4; C. W. Taylor, 3; William Mayes, 1; J. M. Frankenberger, 1; C. W. Gramley, 1; C. D. Getz, 1; Roy M. Hanna, 3. The following men had cows producing over forty pounds of butterfat, or

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Of course they like it. It's better than mother's milk—never too rich nor too thin—always just right.

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is made by experts and guaranteed by one of the most reliable feed manufacturers in the country. Only after years of experimenting—of making every possible test—has this feed been compounded. As a result it is a perfect blend. Calves thrive on it. They grow into healthy and valuable animals—easy to sell at a profit. Feed your calves what they like. It's Pratts.

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Can be used with Ford, Overland, Dodge, Reo and Chevrolet 490 cars and Fordson Tractor. Your automobile has a powerful engine—it will outlast the car and you might as well save your money and use it to do all your farm work. No wear on tires or transmission. Hooks up in 3 minutes. No permanent attachment to car. Cannot injure car or engine. Friction Clutch Pulley on end of shaft. Ward Governor, run by fan belt, gives perfect control. Money back if not satisfied. Ask for circular and special price.

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It Makes Your Feed Bill Smaller and Your Milk Check Larger

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Look Into This

When dairymen from all over the country write us saying they have never found any ration to equal International Special Dairy Feed—that they are saving money on feed—and getting more milk, it is time for you to investigate. Find out about the ingredients—scientifically blended grains, grain products, cottonseed meal, feeding molasses, etc.—every one a milk-maker. Then try it on your cows. If you do this, you will never change to any other feed.

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Don't say "This feed looks good to me, but I'll wait until tomorrow." Tomorrow never comes. A promise never increased the milk flow yet. See your dealer today and order a trial ton. It is guaranteed to make good for you. If there is no International dealer near you, write to us.

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There is a certain feeling of satisfaction in marketing your Raw Furs to the best advantage. Let us give you that sense of gratification that will surely be yours when you receive our check for one hundred cents on every dollar. Values based on unexcelled marketing conditions, liberal assortments, and 30 years of square dealing.

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Make your farming operations more efficient with GRO-ALL Fertilizers. Every atom of plant food becomes available under natural soil conditions. There is no waste. GRO-ALL Fertilizers are always in good mechanical condition—never hard or lumpy. This means labor saved for the farmer, and labor saved is money earned. Feed your land with liberal applications of GRO-ALL each year and harvest larger yields of improved quality.

Attention!

Every sack of GRO-ALL bears our trade mark—the Seal of Character. Look for it when you buy fertilizer.

Thirty-four years of continuous yearly growth is indicative of the high quality product and excellent service rendered by

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Fertilizers of Character
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Buy By This Trade Mark

THE CENTRAL CHEMICAL COMPANY
HAGERSTOWN, MARYLAND
Gettysburg, Pa. Baltimore, Md. Harrisonburg, Va.

Agents of Character Wanted in all unoccupied territory.

over one thousand pounds of milk last month or during September, but which list was omitted due to an oversight: J. G. Nolan, 1; R. H. Harris, 2; Fred Muthler, 1; C. D. Getz, 1.

There is greater interest being shown in the cattle industry in Clinton County than ever before. Intense interest is still shown in the contest for the large silver cup that is to be presented to the owner of the three largest milk producing cows. One of the greatest drawbacks to the raising of cattle at the present time is the high cost of dairy feed. In face of the rather unsettled condition of the feed market, the cattle raisers do not feel justified in laying in a supply of feed for the winter as has been done heretofore. Efforts are now being made to buy feed in carload lots and so materially lessen the cost of producing milk.

The organization of another association is now in progress, and it is probable that the New Year will see it in operation in the county.—Samuel A. Hamil, Tester.

SUPPLEMENTAL VALUE OF DAIRY FEEDS

Few feeders appreciate the remarkable value of linseed oilmeal in feeding dairy cows and calves. So far as chemical analysis is concerned, it may be stated as a fact that prime cottonseed meal and prime linseed oilmeal have practically the same feeding value per unit of protein. There is a big difference, however in the properties of these feeds, and upon their value when fed in combination with other feeds, which we cannot afford to overlook in purchasing grain feeds for our dairy cows and young stock.

One of the most interesting things brought out in the feeding experiments conducted by Hart and Steenbock, at the Wisconsin Experiment Station, is the remarkable supplementing qualities of the proteins of oilmeal for those of other grain feeds. In feeding with cornmeal, for example, if twenty-five percent of the proteins of oilmeal are supplemented with seventy-five percent of the proteins from cornmeal the mixture is used for the formation of body proteins to the extent of about forty percent; whereas corn proteins alone are utilized to the extent of only twenty-four percent, and those of oilmeal to less than twenty percent. Feeders of dairy cattle have noticed equally as satisfactory results from feeding oilmeal along with cornmeal to cows producing a full flow of milk, but have been unable to explain the results, other than that oilmeal had a beneficial effect upon the bowels and other digestive organs of the cows. Experiments and experience indicate that when twenty-five percent of the proteins come from oilmeal the results are better than when other proportions are used.

Such results indicate the possibilities of mixing grain feeds so as to overcome the weaknesses of certain feeds and make a more valuable mixture than is possible when proper attention is not given to factors other than chemical analysis. It should be clearly understood, however, that much of the research work in combining foods is not perfected sufficiently from the standpoint of digestion experiments to help us materially in predicting the value of a single protein or a combination of proteins for milk and growth. The only way to work out these feeding problems is to give the feeds to one's animals and observe what they do with them in the way of milk production or growth. To secure the most reliable results in determining the value of feeding materials it is important that we conduct experiments with cows giving a maximum flow of milk, or with young animals which make as rapid gains as the chemical nature of their food will allow.

Aside from the value of linseed oilmeal as a supplement to other grain feeds I am convinced that a feeder can afford to pay more for oilmeal than for cottonseed meal when there are no succulent foods, such as roots and silage, to form a portion of the ration. When there is silage it does not make so much difference whether the feeder uses cottonseed meal or oilmeal, but the experienced feeder will prefer to feed, at least, one-half oilmeal to counteract the constipating effects of the cottonseed meal. Where there is nothing but dry feeds, one can well afford to pay several dollars more per ton for oilmeal than for cottonseed meal; because oilmeal has a desirable laxative effect upon the animal's digestion.

Many feeders are convinced that these recent experiments have not fully determined all the good qualities of oilmeal, but we do know from many years of experience that oilmeal is a most excellent feed for dairy cows and calves. If an animal is run down, out of condition, so to speak, and fed a little oilmeal regularly it will show its effect in a short time. Results are more noticeable during the late winter and early spring.

Oilmeal should never be fed in large quantities, that is, not more than two pounds per cow per day and corresponding quantities to young stock to get the best results. Of course, some feeders recommend larger quantities, but in most instances moderate amounts have given the best results.

The results of some of these recent experiments indicate that in purchasing feeds to supplement our home-grown supply we need more knowledge than is furnished by the label which dealers use to declare the protein, moisture, ash and carbohydrate content. The source of the feed and the processes of manufacture must be considered as well as its value when fed in combination with other feeds.—W. M. Kelly.

WATERED BUTTER

"Philadelphians are being swindled thru the sale of heavily watered butter. In cases investigated by me, creamery men and wholesale butter dealers steal from the consumer an average of fourteen cents on every pound of butter thru the illegal addition of water. This illegal adulteration runs from eighteen percent, the amount permitted tacitly by the State of Pennsylvania, to forty-two percent."

This is the statement of Robert Simmers, agent of the Pennsylvania Dairy and Food Commission having charge in the Counties of Philadelphia, Delaware, Chester, Montgomery and Bucks. It reveals a concerted defiance of National and State regulations by a number of butter manufacturers who supply the Philadelphia market. Arrests and fines have not checked the guilty creamery owners in their determination to continue flooding this city. The state authorities, in an effort to smash the watered butter combination, have called upon the Federal authorities for aid.—"The Press."

"MY use of Goodyear Cord Pneumatic Truck Tires shows me that pneumatics not only travel better on our clay roads but also are better for the roads. Solids have a hard time in the soft ruts and they are hard on the roads. I have observed that others here are taking note of this."—A. J. Emmerton, Farmer, Bloomer, Wis.

THERE is scarcely any work done on the Emmerton Farm, near Bloomer, Wisconsin, that is not aided directly or indirectly by a motor truck on Goodyear Cord Pneumatic Truck Tires.

Their traction enables this truck to haul fertilizer over plowed ground, to carry feed to livestock wherever located, to deliver oil to tractors and to distribute fencing.

For the same reason the truck easily transfers corn from binder to silo filler and grain from separator to bins—all off-the-road work.

Mr. Emmerton's experience, however, equally emphasizes the advantage of the Goodyear Cords over solid tires on the local clay roads, noting that the pneumatic-shod truck overcomes conditions impassable to solid-tired trucks.

Still another important significance attaches to his statement that the pneumatics are regarded with growing favor in the surrounding community because their cushioning action saves roads.

It prompts the observation that this particular virtue of the pioneer Goodyear Cord Pneumatic Truck Tires also is a factor in their rapid and broadcast rural adoption.

The Goodyear Tire & Rubber Co.
Akron, Ohio

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Such a fine, warm house at such small expense!

The RICHARDSON
ONE-PIPE HEATER
Solves Many Problems

With but a single pipe—one register *only*—this entirely modern, scientifically designed furnace (*made and guaranteed by the oldest and largest manufacturers of heating apparatus in the United States*) furnishes a constant circulation of fresh, warm air throughout every room in the house—abundant heat at all times, *evenly distributed.*

Just think of what this means in economy!—Installation costs cut to a minimum. No lengthy pipes to buy or run to various positions. No cooling of the heat before it can reach your rooms. Less dust—less dirt—less labor. *Direct heat* rises and spreads instantly to the upper floors. None is wasted. Warm house, cool cellar. And you can burn *any kind of fuel*—LESS OF IT than is demanded by other types of heaters.

The Richardson One-Pipe Heater is suitable for city or country homes, schools, churches, stores, etc.—*old or new buildings.* NOW is the economical time to install.

We make Heating Apparatus for every system—steam, hot water, vapor vacuum pressure, or hot air.

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Securing LIFE INSURANCE of the Company which is loaning its MONEY on farms.
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$5,000 MEN WANTED
High grade, live wire, farm salesmen, age 25-50. A—1 character. In or near good town, experience unnecessary. Build a clean paying business at our expense, we show you how. Auto needed. If interested write for further information. Strout Farm Agency, 307 Union Bank Bldg., Pittsburgh, Pa.

FOR SALE—Purebred Buff Rock Cockerels. Must sell soon, have no room left. Fancy stock $5 to $7. R. J. McPHERSON, Sand Brook, N. J.

POULTRY

POULTRY EQUIPMENT

A small tool box for use in repairing buildings and equipment is handy on the poultry farm. One section can be divided into squares to hold nails of various sizes. A space should be included for building paper nails which are often needed in repairing the roofing paper on a poultry house. A box of this kind for nails saves many of them which might be left around the farm after completing a repair job. The small kit also keeps the most frequently used tools in one place so they can be obtained quickly when repairs are made.

The poultry farmer who can do his own carpentry work can save much money in the construction of his equipment. Many jobs can be finished in odd hours or on rainy days. Small brood coops and feed hoppers can be built in the house during the winter. A carriage shed is often large enough to be used for building a colony house on skids. When visiting other poultry plants study the construction of the buildings and make sketches of any equipment that seems practical and worthy of duplication on the home farm. Sometimes a home-made sketch is more easily understood by an unskilled worker than the finest of blue prints. It is surprising the quality of poultry houses that a farmer can build if he will work slow and carefully and not become discouraged. Whether skilled carpenter work can be dispensed with at a saving in money all depends upon the amount of other farm work to be done and the labor conditions in the vicinity. Some lucky communities possess what is called the jack of all trades or handy man who can be obtained at a moderate wage to put up most any style of building. It usually pays to do all the building work in the fall if possible because the poultryman is very busy in the spring with the work of incubation and brooding.

Some poultry fencing is necessary to carry on the business to the best advantage. It is best to separate the young stock from the old at hatching time and later separate the pullets from the old hens and the cockerels. The poultry business gives the most satisfaction when the birds are under a certain amount of control and not allowed to roost in the barn, on the farm implements and around the house. Of course the garden and flower beds must be protected at certain seasons. Better flocks of poultry can be developed if certain fenced enclosures are available for special breeding pens. Some poultrymen like the steel posts as they make a neat fence and seem to last a long time. They are quickly placed and save the digging of post holes. When buying wire fencing it pays to obtain it high enough to keep most of the birds from flying over and also select a mesh small enough to keep the chicks from crawling thru. It is rather difficult to keep an occasional bird from flying fences and that is why one breed of poultry on the farm is apt to be the safest and most satisfactory.

Proper feeding of the birds helps to keep them from flying fences. They soon learn to stay where they are sure of obtaining a square meal. If they do fly over, nail strips about a foot long to the top of each post, slanting strips inward at an angle of 45 degrees. Then string a narrow strip of poultry wire or barbed wire to the strips. When a bird attempts to fly over the fence she will start from a point too close to the fence and not be able to clear it. After several unsuccessful attempts a hen will usually stop trying and be satisfied to remain on her fenced range.

It is necessary to have special bins for the grain used by the farm poultry. If they are fed from the same cribs and bins where the farm animals receive their rations it is impossible to keep any poultry records or know whether the flocks are profitable or not. In some farm flocks the birds are consuming much more grain than their owner's realize and a knowledge of feed costs is apt to lead to careful culling and the keeping of better poultry.

Too many farmers who need cockerels to improve their poultry are apt to wait until spring before ordering them. The selection will be greatly reduced at that time and a better quality of birds can be obtained for less money now. Every year thousands of cockerels are marketed as meat when they might have a greater value in the improvement of farm flocks. They are sold in the fall for meat because the farmers who need them would not be ready to order until spring and specialty breeders can only afford to keep the cream of their flock over winter at the present value of feed. The poultrymen who fill their needs this fall will be thankful next spring when hatching eggs are bringing good prices and good breeders will not easily be obtained until after the hatching egg season.

The pullets that begin to lay first are apt to be the most vigorous and best layers. They have grown rapidly and feathered out at an early age. Band such birds and study them. They will be worth saving for breeding stock as year-old hens and they should produce many pullets which have their valuable characteristics.

Sometimes bargains in pullets can be picked up at farm auctions. Examine the birds and if they are free from pests, ready to lay and of good type they can often be made profitable if there is any extra housing room on the farm. However do not buy a collection of cull poultry at any price. They are worth the most for meat and they are seldom profitable as layers.

Cull the purebred stock just as vigorously as you would cull scrubs. Because a bird is purebred she is not a sure profit winner. She must have other characteristics such as vigor and egg laying type. Some of the failures with purebreds have been due to keeping every pullet that hatched just because she had the markings of a purebred fowl. By keeping only the best of the purebred stock the quality of the flock is improved each year until finally the best are numbered in large flocks and not by a few individuals.

Put the furnace in order now if it hasn't been done before.

LESSONS FROM THE 1919 APPLE HARVEST

(Continued from Page 8.)

rich and attractive red that they should have when properly grown, and the twigs fail to attain the deep mahogany color that makes them bring the price.

Another very common mistake is in not moving the fruit either to storage or market promptly enough. It is quite remarkable how a very few days of heat such as we have frequently had this fall will ripen up even the latest winter varieties. For best results, the fruit should always go into storage within two or three days after it is picked, and any delay beyond this is likely to be directly reflected in the shortened life of the fruit in storage. If the fruit has to stand longer than the period named, it is better to leave it in the open barrels rather than to barrel it up and let it lie around after that.

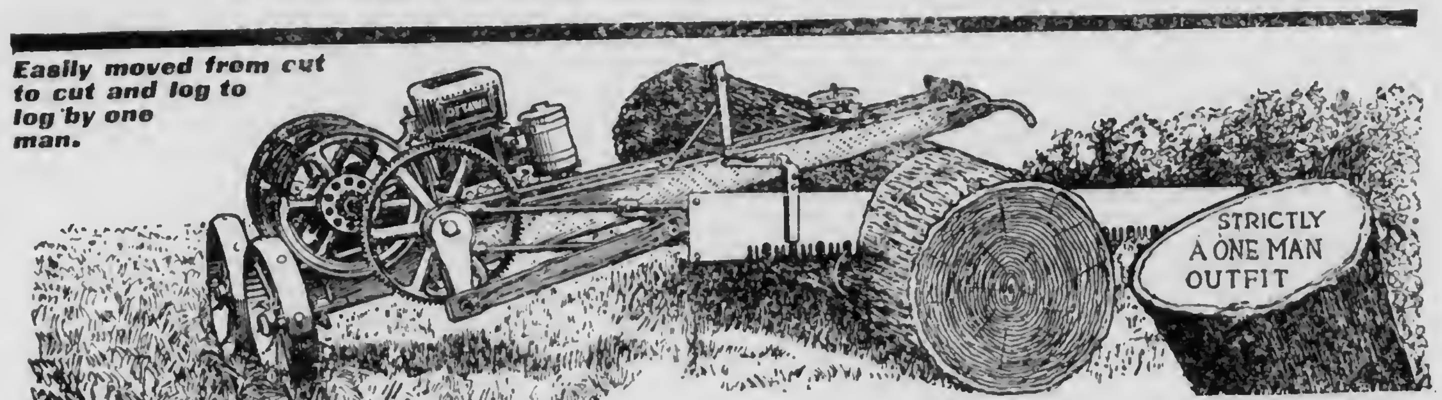
In shaping the orchard up for winter, one of the important things has already been mentioned, viz., getting the borers out in the fall, if possible. When this is done, the chances for fire-blight infection around the "collar" of the tree are very greatly reduced, accordingly to the best pathologists. If this "worming" is deferred to the spring, as is quite commonly the case, the blight bacteria become active in the upper portions of the tree and are washed down by the millions with every shower, thus giving all the lower portions of the tree a veritable bath of blight bacteria; any recently opened wound below is practically certain to become inoculated unless it is thoroly and efficiently protected. The wonder is that more of our trees are not killed every year by this downright scourge, so long as the practice of spring "worming" is continued, without any special anti-septic precautions.

When the "worming" is done in the fall, however, care should be taken to avoid exposing the newly opened bases of the trees to sudden freezes, as this may be almost as serious as an infection of blight. The danger of blight infection of course does not apply to the stone fruits, so the worming of them may well be deferred until spring, at least in part.

The customary protection of the young trees against mice and rabbits should of course be provided before winter sets in, and all dead or broken limbs may well be removed and burned to keep them from furnishing food or shelter to other pests of the orchard.

BUCKS COUNTY AT EASTERN STATES EXPOSITION

Three Bucks County boys were chosen to represent Pennsylvania at the Eastern States Exposition at Springfield, Massachusetts; to judge pigs, corn, and cows, in competition with nine other eastern states. Eugene Rosenberger and Russel Weiss from Milford Square Clubs, and John Bryan from Bedminster Clubs were the representatives. They each won a gold medal for winning first place in judging pigs, and a medal for winning second place in judging corn. John Bryan won a second medal by substituting for one of the Mercer County boys. In the individual cow judging contest Eugene Rosenberger won first place giving him a $200 Holstein heifer calf; and John Bryan won fourth place in the individual cow contest giving him a $200 Ayreshire heifer calf.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STRICTLY A ONE MAN OUTFIT

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25 Cords a Day: Cuts down trees

IT'S the easiest kind of work to cut down trees and saw any timber any size or length. On thousands of farms the Ottawa Engine Log Saw is proving the greatest labor-saving device ever invented. You alone can do the work of ten men with the Ottawa. It does away with the back-breaking, hard job of cross-cut sawing the old way or lugging logs to a circular saw.
The country is facing the worst coal shortage in history. You can help your friends, neighbors, and the people in town by sawing wood for fuel, and make splendid money. Noah Digge of Jacksonville, No. Car., writes, "I cut 27 cords of wood in one day, under unfavorable conditions, and in 52 hours I sold, and delivered $75 worth." Men everywhere are doing the same. The Ottawa Log Saw provides cheaper and more plentiful fuel. Quickly pays for itself.

"Made $34.50 in One Day"
I am using your one man Ottawa Log Saw and am well pleased with it. It does just what you said it would do. I ran my saw one day and made $34.50 sawlog stave bolts.
W. W. EMERSON
Hodges, Ala.

"Wish I Had It Long Ago"
I am well pleased with the Ottawa outfit. It has filled the bill in every way. I only wish that I had ordered one long ago.
E. W. LOOP
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"Easy To Start—Plenty of Power"
The Ottawa is certainly all right. It does splendidly good work. The engine is easy to start and has plenty of power to operate the saw.
E. D. PARKER
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"Fulfills Fondest Expectations"
I want to say that the Ottawa Log Saw I got from you some weeks ago has more than fulfilled my fondest expectations. It does all and more than you claim for it.
E. L. PRINGLE
Ashdown, Ark.

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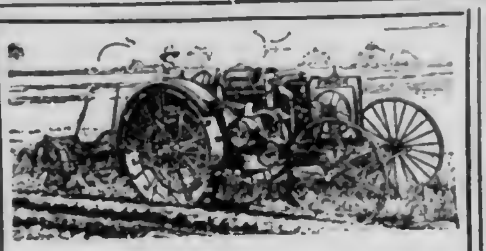

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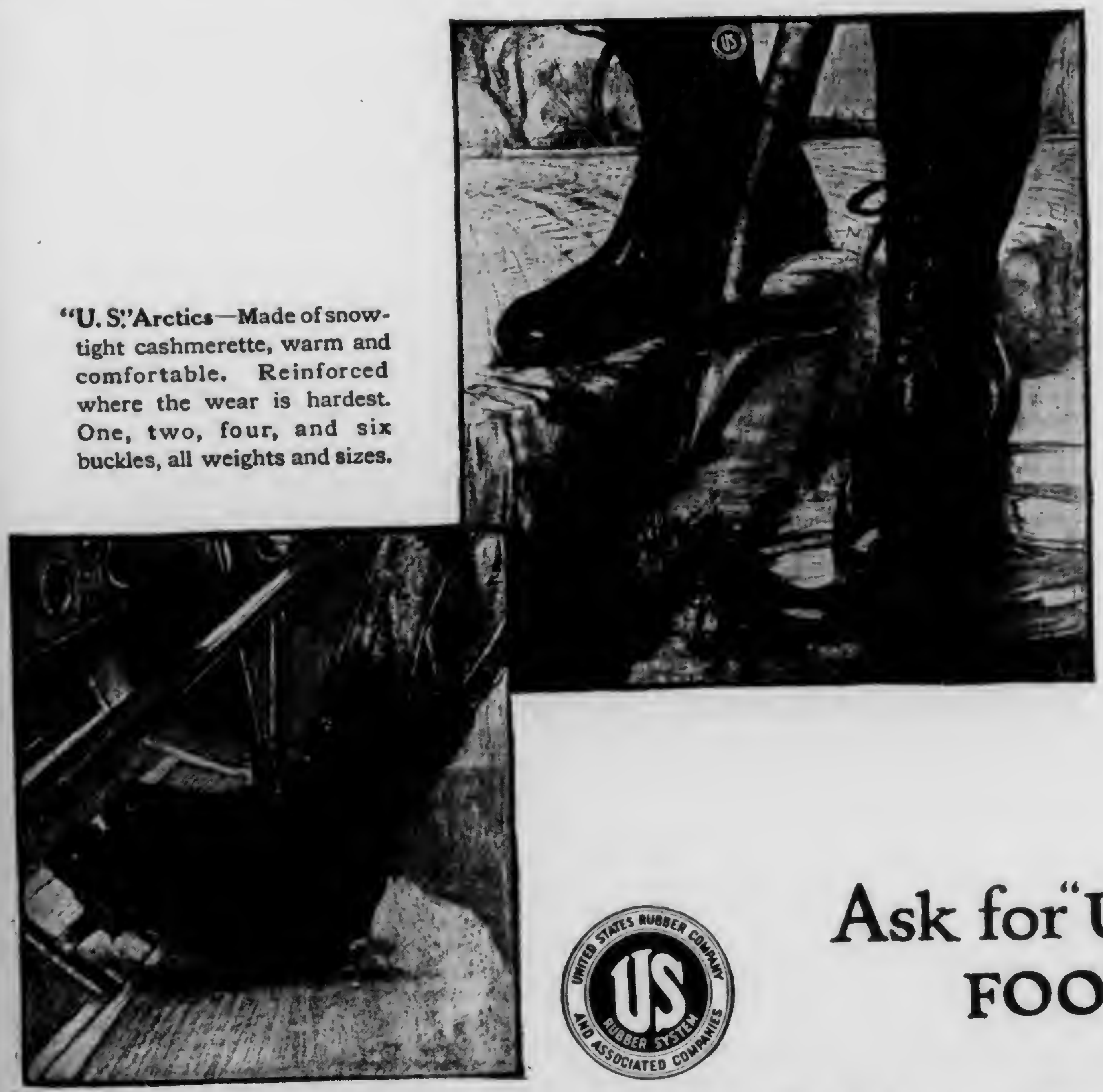

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HOUSEHOLD

Some Made-Over Furniture

PUTTING OLD USELESS THINGS INTO SERVICE

When we bought the house where we now live, there were a few bits of cast-off furniture left in it that looked to me as if they were worthy of better treatment. Writing to the one-time owner of these dust-covered articles, I learned that she did not at all desire to use them, and I was given sole possession of what was considered rubbish.

I dusted a cute little flat-top trunk that I found in the attic, padded the outside of it with pieces of old carpet, covered it with green denim tacked on with inconspicuous upholstery tacks, and thus made a desirable shoe box, which takes the place of a chair in a tiny bedroom where there is little room for anything but the most needed furniture.

Dressing Up a Kitchen Table

The dainty dressng table that I show you herewith and its accompanying chair were just an old kitchen table and a rather badly scarred old bedroom chair. Both were scrubbed to remove dirt and dust, painted white, then coated smoothly with white enamel paint. Two sticks or standards of the desired proportions were hired made to hold the mirror on each side. These were fastened on at the back, the old mirror was hinged to them just as the "boughten" dressing table mirrors are hinged, and these standards, too, were painted and enameled the same as the kitchen table. A striped cushion, its colors harmonizing with the bedroom furniture, was placed on the now pretty enameled chair. The dressing table was "trimmed" with the young grl accessories of such a table, and the girl who uses it in her dainty bedroom finds it quite as attractive and as useful as if it had cost much money and had been purchased at a high-grade furniture store.

A Mirror and a Stand

Then here is another of my excursions into furniture fixing. I feel actually proud of this handsome little table that stands under the little shelf supporting the long mission style mirror. This stand was found in a little dark room in the cellar. It had a hole thru it for wire, having been used to hold a telegraph instrument, or something like that. It was very deeply scarred, cellar-worn and most unattractive except for its good old lines that could not be taken away from it. After the thoro scrubbing that it received to remove everything that would interfere with its taking paint readily, a bit of wood was fitted into the hole, then this and all the scars were filled in with putty, smoothed over, and allowed to dry. After the putty was quite hard the little table received two coats of dead black lacquer paint; glass brass-trimmed knobs supplemented the old wooden ones that were on the two little drawers that now add so much to both the usefulness and old-timey attractiveness of my little stand.

Also the embellishments are worth mentioning: I am the delighted possessor of two lovely old brass candle sticks, and they are accompanied by a hammered brass tray and those quaint old brass snuffers that our ancestors used for trimming the candle wicks. These things needed a shelf to set on, also for the mirror to rest on. As I was ten miles distant from a furniture store and very busy settling our new home, I just took a piece of paper and the shears, cut out a pattern copied from an old marble shelf supported with brackets that used to delight me in my girlhood home. I sent this paper pattern to our village handy man, and he made for me a shelf of some soft wood that, lacquered a dead black, makes a pretty finish. This shelf supports the mirror, with frame in mission finish, that hangs above it, holds my ancestral treasures, and completes the most attractive spot in my living room. On the little stand I placed a pretty embroidered centerpiece, and on this rests a black-and-gilt Japanese tray. An old blue bowl filled with old-fashioned flowers would be even more attractive.

A Rejuvenated Stand and Mirror

Just a little more about dead-black finishes. They enrich cheapness, cover a multitude of defects, and in my opinion are often lovely. I wanted also to show you a desk that I know, which was completely made over. But I have been unable to hear from the ingenious woman who with her husband's help sawed off curlycues from the homely yellow oak desk, and transformed it into positively a thing of beauty.

Paint will do such wonders. In a charming tea-room where I ate a while ago were once old wooden chairs and little square pine tables made very beautiful, I thought, with light tan pain and stencilled blue love-knots on the corners of the tables and on the chairs backs. An old set of wooden chairs and an old extension table could thus be transformed into a dining room set that would be well worth the work. A kitchen table with a long, narrow mirror topping it, not on standards, but rigidly fastened to the table, could supplement a buffet in such a dining room. I have something of the sort in mind. I have the "foundations" for carrying out the idea, and if I have the good luck to make a practical demonstration of it, you will hear from me again.

This is my fancy: Quaint painted chairs, the fall leaves of my table stencilled with the same design as on the chair backs only in a larger size of the pattern, maybe a band of the decorating color painted around the grooved edge of the entire table; a cross-stiched scarf or runner across the table when it is not in use; a deep, old-fashioned dish, a pitcher, or a sugar bowl of "ye olden time" in the center of this, holding, according to the season, home-grown apples or nuts, or quaint sweet williams, larkspurs, or just "'green things growing."—The Make-Over Lady, Broome Co., N. Y.

RURAL WOMEN AND MONEY MAKING

That rural woman must be very remote from town or roadside who cannot make some extra money these days, when almost everything that can be raised on a farm or in a garden can be readily sold.

One busy woman of this community took some freshly pulled parsley, well sprinkled and in a clean basket, to a country club house. The steward was delighted at the chance to buy it. He ordered $2 worth a week brought in two lots on different days. This was over a year ago. More than a hundred dollars from well cared for parsley beds!

Some years ago, a lover of flowers, notwithstanding the calls of house duties and the care of several children, took time enough to plant two long rows of lilacs from the house to the barn. She left a wide space between which was subsequently used as a path. For eighteen years she has sold the lilacs and made good money from them. This spring, flowers being extraordinarily high, one wagon load brought $50 and for the narcissus sold separately she realized $45.

Aside from this easily earned money, it is a joy for that family to walk that fragrant path in lilac time. It is a bit of beauty added to the farm and every beautiful thing enhances the "tone" of a place and certainly increases its actual value.

A parsley bed, several rows of strawberries and a plot of Sweet Williams brought $47 to bulge the purse of a nearby little farm woman this season. This neat, little sum was made in ten days! Working one day in the home garden which lay by the public road, she was approached by a motorist who had seen the luscious red berries gleaming among their green leaves. Would she not sell them a few boxes it would be such a favor? Of course she did and at $.35 a box. For several different days after that when she was working in the garden, she kept a neatly covered wheel barrow near the road. A sign ran up by it: "Strawberries For Sale." There were the boxes of lovely berries on the barrow and there were more in the garden to be picked. Business flourished and she was amazed at the money she earned. They saw the Sweet Williams and bought bouquets. They purchased parsley and begged to buy chickens. These could not be sold at that time being too small.

A young woman, widowed a little more than a year ago, was telling me of her work. She said she had realized that her financial situation was acute and that she must make the living for herself and two small children and that she must begin at once. She believed she could and would go on with the squab business. They, her husband and herself, had started it but a few months before her husband's death and were on their way to success.

They had been forced to borrow money in launching out. Now she must pay the remaining $600 of the original debt. The owner of the house which she lived in wanted the use of the property and this necessitated not only the family's removal but that of the pigeons which must be much more thoughtfully planned. The latter had to be moved twice before permanent quarters were obtained. For the moving of the birds she had to hire labor, otherwise none is employed. The pigeon lady feeds the birds, picks them, ships them; she is their sole care taker and their friend for she loves them.

She has 500 pairs of pigeons. Her squabs are shipped to New York twice a week and she has received as high as $.95 a piece. She has paid $600, the expenses incident to her husband's death, bought a house and five acres of land, made a living for her mother, her children and herself and bought an automobile.

"Do not believe," she said, "that all of this is paid for. In a short time, however, I will be free of debt and within a year I will be saving money."

A farmer's daughters, my nearest neighbors, have an income of their own. They work very hard for their parents and were encouraged to remain at home by a loan of a small portion of the farm. They sold 12,000 spring flowers at $.35 a hundred and many bunches of lilacs at $.15 each, 2,700 peonies at $.04 a head. Later they will dispose of a large plot of dahlias and several long rows of yellow and white chrysanthemums.

These are but a few instances of money making by our rural women. —Elizabeth Jean.

This Dressing Table Was Once a Plain Kitchen Table

TRAINING LITTLE CITIZENS

A Brave Fireman

By ADELAIDE A. WHEELER

Nancy Bryant' father was a fireman. He could never stay at home long wth mother and Nancy because he had to spend so much time at the fire station. But one cold winter night he was able to get away, and after supper Nancy said:

"Oh, Father, let's play parcheesi tonight!"

"All right, I'd like to," Father replied, "if mother will play, too." So Nancy ran for her parcheesi board and soon Father, Mother and Nancy were having a fine game. All at once they heard a loud "Clang!"

It was the big bell in the living room which always rang when there was a fire.

Father jumped up and hurried for his coat and hat.

"Oh! I'm so sorry that you have to go out again this cold night," said Mother.

"Isn't it too bad," cried Nancy, "when we were having such a good time!"

"Yes," Father replied. "I'm sorry, too, but someone needs me."

Then he opened the door quickly and ran down the street to the fire station as fast as he could go.

Nancy jumped up and hurried over to the window.

"Clang, clang clang!" There was the hose-cart.

"Clang, clang, clang!" The hook and ladder went whizzing by. Then came the flying sparks of the big engine. Father was on the back, and Nancy peered thru the darkness to see him, because she knew he always waved his hand as he passed.

When the firemen reached the fire, they found that a house was burning. Grabbing their hatchets, they leaped from the wagons, connected the hose, and got to work!

A crowd soon gathered and someone cried, "There is a little girl upstairs!" Father Bryant called out "I will get her!"

The firemen quickly raised a ladder to the window and up went Father Bryant. In the house the smoke was so thick he could not see, so he dropped on his hands and knees because the smoke is never quite so thick near the floor. Feeling his way as best he could, he crept along from room to room until at last he heard a little girl crying.

"Don't cry, little girl," he said. "I'll take you out all right." Then he wrapped a big blanket around her so that she was safe from the flames, and carried her in his arms back to the window. When the crowd that had gathered saw him bringing his little burden down the ladder, they cheered and cheered.

The little girl's father rushed forward and caught her in his arms and after he had hugged her close, turned to Father Bryant, and said:

"How can I ever thank you enough?"

"That's all right," replied Father Bryant, "I have a little girl of my own at home."

WHAT HAPPENED TO THEM?

When visiting a town friend the other day we were walking thru her garden, and she exclaimed: "There are the flowers and plants which you gave me. And look at that celery! It was planted much earlier than yours, and yet it is not nearly so large. And those beans, look how spindly they are! What is the trouble with them all?"

While she continued the arraignment of her garden, I took a good look around. There was a plant of heliotrope, which had been fine when I gave it to her in the spring. It certainly was not much to look at now, not much larger than when it went out of my garden. Mine, same size as hers when I took it to her, is now, [illegible] ll sets in, so large it could eas- [illegible] fill a bushel basket.

Looking around, I ciphered out the [illegible] of the lack of prosperity in her garden. Many roofs reflected the sun's rays directly down on her defenseless plants. Her garden was free from weeds, so there could be no trouble from that source, and her soil was apparently, and according to her testimony, what it should be. So we concluded to blame the unthriftiness on the reflections.

This summer I visited the summer colony at Aqueduct. The friends who entertained me have a garden below their lawn, running down to the river, wherein they grow small truck, which they ship to a wholesal house in Harrisburg. The money which they made off their asparagus bed is almost unbelievable. And such beautiful tomatoes and cantaloupes and fine vegetables in general as they had this summer. Yet they never had to water this garden the whole summer long!

How did they manage it? Just this way. After a certain number of cultivations, say three times for tomatoes, they applied a heavy mulch of lawn rakings. Chaff will do, they said, where there are not enough lawn rakings.

The lawn was most beautiful. Amid the beautiful shrubbery there were many fruit trees, and at one side a vineyard, all making profitable beauty.

You know how moist it is under an old board when you turn it up. Mulching acts the same way. In the case of my friend who has three hot roofs beaming down on her garden all summer long, I am sure that another year she will try the mulching remedy and have better results. Where one does not having running water and a hose the mulch is the housewife's only hope if she wants to have flowers and vegetables thrive without lugging barrels and barrels of water.—Mrs. Lloyd R. Shuman, Juniata Co., Pa.

MUSHROOM CATSUP

Please publish recipe for making mushroom catsup.—J. M. F., Pottstown, Pa.

The Kentucky Way

Here is the way they make it down in "Old Kaintuck:" Gather fresh mushrooms, wipe them but do not wash, and pack in a crock with alternate layers of salt and mushrooms, and let stand 24 hours. Then stir them up and let stand two days, after which strain out the juice which has formed thru a thin cloth, squeezing them to get as much of the juice as possible. Put the juice on the stove to boil, and add, per each quart of the liquor, 1 ounce allspice, 1 ounce ginger, 2 teaspoons cayenne pepper, 1 teaspoon mace and 1 teaspoon ground cloves. Boil until thick as you desire to have it, and bottle while hot in bottles thoroly sterilized by boiling at least 15 mintues in water, taking them directly from the water bath to fill. Have the corks also sterilized in this boiling water bath, and push them into each bottle as soon as you have filled it, then cover with melted paraffin by dipping the cork end of the bottle into the paraffin. The Bluegrass folks like this catsup in soups.

Another Way

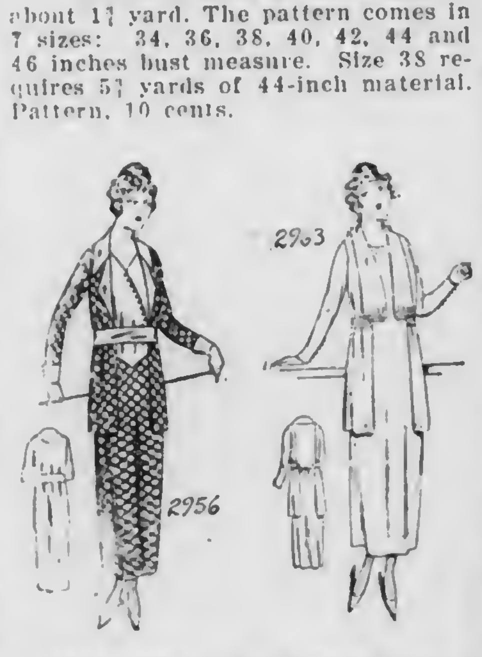
Let the mushrooms stand with alternate layers of salt and mushrooms in a crock in a warm place for 24 hours, then squeeze thru a thin stout cloth. Put this juice on to cook with ½ ounce peppercorns per each pint of the liquid, and simmer slowly 40 minutes. Peppercorns, you probably know, are the seeds of black pepper plants. Measure the liquid again, and to each pint allow ¼ ounce each of allspice, green ginger root cut into small bits, and ground cloves, and one blade of mace. Boil 15 minutes, strain thru a cloth, and bottle while hot in sterilized bottles, and seal as directed in the previous recipe.

A wooden tub or bowl for washing the best pieces of china and glassware will save them from the chips and cracks that are bound to come from a metal or enamelled pan or sink.

PENNSYLVANIA FARMER PATTERNS

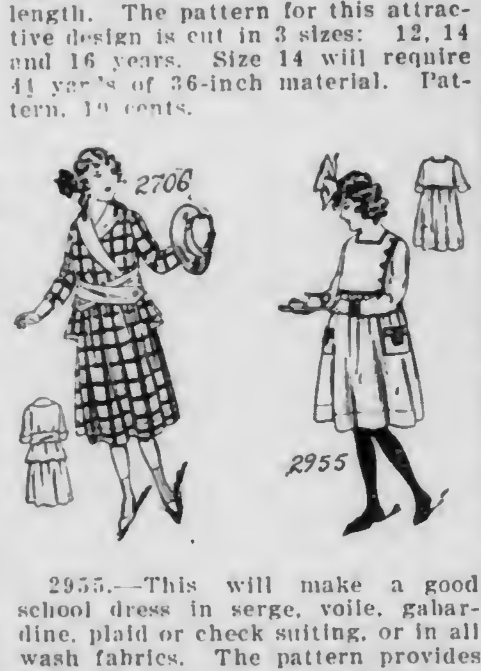
Give figures and letters of each pattern exactly as printed at beginning of each description or we will not be responsible for correct filling of orders. Give bust measure when ordering waist patterns, waist measure for skirt, and age for children's patterns. Address Pennsylvania Farmer, 261 S. Third Street, Philadelphia, Pa.

2956.—Checked suiting in brown combined with sand color jersey cloth, is here shown. The model is also good for broadcloth, satin or velvet, with vest and trimming of brocade or other contrasting material. Width of skirt at lower edge is about 1¾ yard. The pattern comes in 7 sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. Size 38 requires 5¾ yards of 44-inch material. Pattern, 10 cents.



2963.—Smart For Slender Ones.—Good style for serge, taffeta, satin, gabardine or tricotine. Braid or embroidery will be a good decoration. Pattern comes in 3 sizes: 16, 18 and 20 years. Size 18 will require 5⅝ yards of 36-inch material. Price, 10 cents.

2706.—You may make this dress of plaid or check suiting, with facings of serge or satin, or you may make it of wash fabrics with pique, drill or linene for trimming. The waist is cut surplice fashion and is lengthened by a full peplum. The sleeve may be in wrist or elbow length. The pattern for this attractive design is cut in 3 sizes: 12, 14 and 16 years. Size 14 will require 4½ yards of 36-inch material. Pattern, 10 cents.



2955.—This will make a good school dress in serge, voile, gabardine, plaid or check suiting, or in all wash fabrics. The pattern provides two styles of sleeve, each with a simple cuff finish. The pocket may be omitted. The pattern is cut in 4 sizes: 4, 6, 8 and 10 years. Size 6 requires 2¼ yards of 42-inch material. Pattern, 10 cents.

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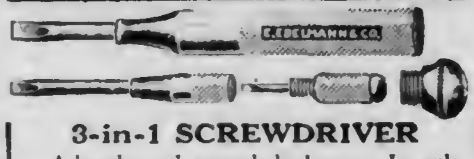

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PENNSYLVANIA FARMER, Phila., Pa.

More Answers to "Bachelor"

The Girls' Letters Are Very Interesting And Convincing

Last week we printed a number of answers to an article signed "Bachelor" in issue of October 25. We present herewith several more of the many received. These letters are so evidently sincere that we recommend them to the serious consideration of parents, and would ask them for their views on the subject—giving the reasons for the existence of the conditions about which the girls find fault.—Editors.

A Gentleman Approves "Bachelor"

While attending the Farmer's National Congress at Hagerstown, Md., I met a representative of the Pennsylvania Farmer and gave him my subscription. I brought a sample copy of the "Farmer" home with me and on looking thru its columns I chanced to come across an article written by a man—a Bachelor—from Westmoreland Co., who wanted to know, among other things, where our future farmers will come from, if our country girls all leave the country for the city.

That settles it. I can neither add to, nor detract a single word from that letter, as those are my sentiments from start to finish. I hope and pray that some lady reader of the Pennsylvania Farmer, will reply to Batchelor's letter, both for his and my sake.—A. S. J., Virginia.

Is He a Prejudiced Man?

I think our bachelor from Westmoreland County must be a prejudiced man or his circle of friends small. It seems strange that he has never met a girl who loves the farm. I do not mean the summer girl who loves the farm for pleasure alone; but the girl who loves the farm the year round.

The girl who loves the sweet fresh smell of each furrow as it is turned, who looks with pride at the flowing fields of golden grain and revels in the beauty of the farm. I am a farmerette—trouserettes and all — not only in wartime but in peace time as well. I would not change places with the city girl because I used to be a city girl.

One reason why I think so many of the country girls do not like the farm is because they have never been made to feel as tho they were really doing things that were really worth while. Another reason is because the older folks are always complaining about what they do. I think if these old fussers would become interested in good literature, music and plays they would have something novel and interesting to talk about than to fuss about hard work on the farm, the lonely evenings and eternal grind.

Another and last reason—I wonder if the shoe will fit—the young men seem to think it quite novel that th young ladies who have lived on a farm all of their lives do not know how this or that should be done. They think these girls are innocent and childish and discourage them by saying "What you don't know won't hurt you." How I would like to have my say to the author of that saying. I wonder if bachelor can recall sometime or other when he thought the chatty, childish, innocent girl was quite a pleasant diversion from the sensible, cheerful girl who would talk with reason about his plans, offer suggestions and discuss the most trying problems which a farmer has to contend with every year. May he find his ideal.—Farmerette, Chester Co.

Not Satisfied

I am a farmer's daughter and have lived most of my life on a farm. Farm life is not very pleasant for a girl when you rise at four in the morning and work until ten at night. Of course it is true that there are few hours in the day that she might have some rest, but there are stockings to mend or other sewing. She is expected to have the meals ready at any hour. She has the cooking, washing, ironing, scrubbing, milking and making butter and many other things to do. If there is any entertainment or social in the neighborhood, she is too tired to go.

The city has far more attractions than the farm. If a girl does have to work in the city, she has a certain number of hours to work and at the end of those hours, she can go to an entertainment or some other place of amusement, while her country cousin is performing some task, and planning her work for the next day.

Vacuum Cleaner Run by Farm Lighting Plant. Such Improvements Make Work Easier and Home More Attractive

It is true there are some farms where there is little drudgery, I believe if the farms were better equipped, and the young folks were given more fredeom they would not want to leave the farm. I, from experience, fail to see much pleasure in listening to chickens and sheep, while the city girls are attending a matinee or visiting their friends. I like kittens but would soon tire of watching them play. If you want any amusement you have to drive several miles before you reach town, and then you must hurry home to get supper, feed the poultry and milk the cows.

We country girls love the country if there were only more amusements and less hard work.

In my neighborhood there is not even a church. I have not as yet had the pleasure of owning a car or having hot water, etc. If I did have these the farm would be more inviting to me.

In my neighborhood the only pleasure we have is attending dances and socials. We folks become more discontented when our city cousins come to visit us, because we cannot show them as much pleasure as they show us. They are much better educated, simply because they have the opportunity of hearing lectures and seeing plays the country girl never is able to see. In the city a girl has the opportunity of seeing many sights for only a few cents. On the other hand the country girl sees plenty of hard work.—A Maryland Girl.

She May Advertise

In answer to the articles of "Whither Are We Drifting?" I will say that for the past few years I have wondered where the farmers of the future are.

I have taken particular notice to the young ladies of the country leaving the farm to seek employment in the city, and all the time the farmers were needing help so badly. They will not do the work on the farm. Of course when the young ladies leave the farm the young men generally follow.

I am a young woman and I have always said I was going to live on a farm. If I can't find a farmer I will stay single all my life. For I am a farmer's daughter and could not give up the pleasure of the farm My mother says that I inherit the love for the farm from several generation back, because my grandparents on both sides were farmers.

I have never yet thought of advertising for a husband, but if I am not successful in finding a farmer before I am 30 years of age I may have to advertise for one.

The "Metropolitan Bug" has never bothered me yet, and I hope it never comes to this part of the country. I feel sure it could not change my ideas or love for the farm. I would rather live alone than to live with some one who was displeased or discontented. I would say to follow the occupation which you are now engaged in, for a farmer is always sure of his living.

I do not know what is wrong with the young people nowadays or what they see in the city, unless it is excitement and entertainment. But such entertainment as operas, movies and dancing do not appeal to me. I would rather live on a farm where I could be free and have good fresh air than to be housed up in the city in the smoke and dirt.

One time after I had been away from home and came back, I went to the barn as usual to help with the milking. The cows all seemed glad to see me and reached over for me to pet them. Afterwards I made the remarks that the cows all liked me. I was told that all cows liked "green things."

I have never ridden horse back very much, but have often walked to the nearest town and back in one half of a day which is 10 miles.

We do not have electric lights or washing machine. Our ironing and sweeping are done the old fashioned way.

We have very good water but we have to get it by turning a winless, and I am much better contented at home than any where else. I cannot see a very bright outlook for the future farmer unless things take a different turn from what they are now.—Young Lady, Clearfield Co.

Finds Conditions the Opposite

We find the conditions just the opposite in this part of the country. There are very few young men who are satisfied on the farm. They go to the plants and shops or most any occupation but the farm and the parents and girls do the farming. I suppose the young men going to the city is the reason for so many girls going, but I would not go for such a reason. Altho some of we girls are fearing the haunts of "spinster" days, we still love the farm and advise any one to risk such haunts rather than go to the city when they prefer the farm.

Speaking of the hard work mentioned by the Westmoreland bachelor I think a country home with all modern conveniences preferable to a city's attractions. Of course, all farmers cannot afford so many conveniences, but I think if our fathers and mothers could stand hard work we should not complain too much.—Farmer's Daughter, Bradford Co.

Deeply Interested

It was with deep interest, indeed, that I read the accounts of "Whither Are We Drifting," by a Westmoreland County bachelor. With interest, I say, for he seems to voice the sentiment so well of why the girls are leaving the farm, tho to me it seems as tho the girl is not wholly to blame.

I do not believe that the girl who leaves the farm and enters into some city work expects to make it her life work. I believe I can say for the majority of them that they are still entertaining some hope of getting back to the farm—some day.

We in this section of the country have our Farm Women's Society and Grange meetings and other entertainmens, on the farm, that keep us from thinking the farm a lonely place. Neither is it the work, for that will adjust itself.

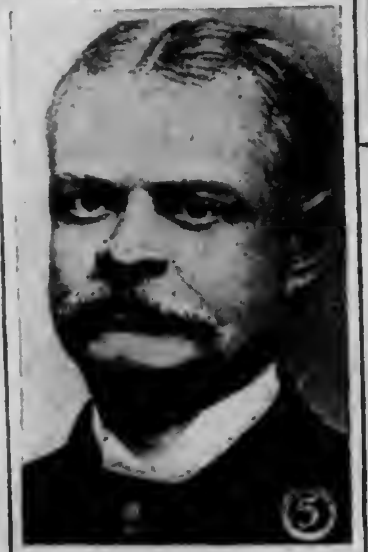
I can say with the bachelor of Westmoreland County that my highest hope lies in having a cozy little home on a farm for I, too, love the cows and chickens. But what does a girl want to do after she is no longer needed at home?

I have given both sides my consideration and have decided that—if my brother should be married and move on the home farm, where we now live my father undoubtedly would lead sort of a retired life. Would I sit at home, in idleness, and wait for my knight who may never come? Indeed not, tho I love the farm I should go to some city finish my education, to a certain extent and then my hopes will be of entering a hospital and after about three years of hard study and labor, be a nurse.

Where will my hopes of ever being a true farmer's wife be? Crushed to the earth! I say with the poet that "things are not as they seem" to the young man who watches his farm girl friends leave for the city. The girl does not want to be idle and prefers city work, with the wages earned there to being some farm lady's hired maid, for half the wages the city will pay.

(Continued on Page 28.)

PASSING EVENTS IN PICTURES



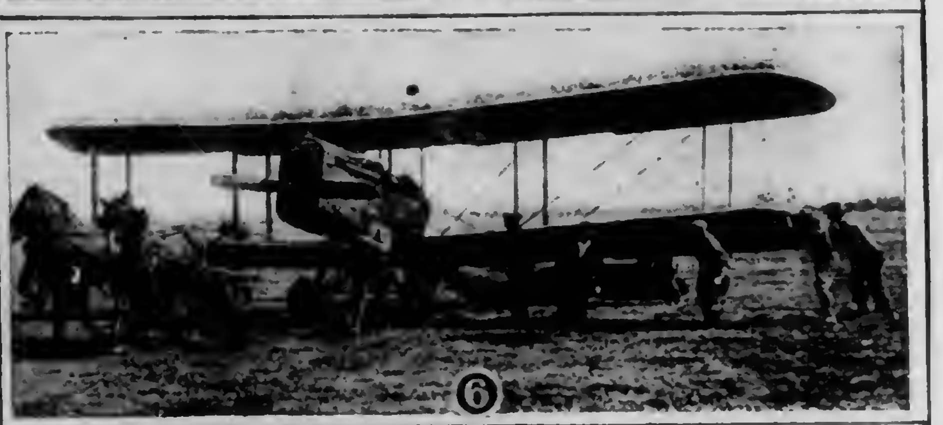


Photo Copyright by Underwood & Underwood

1.—Miss Bertha E. Rembaugh seeks Judgeship in 1st District, Manhattan, N. Y.

2.—The Queen of Belgium Meets Luther Burbank, the Wizard of Horticulture.

3.—The Winning Smile of the "Flying Parson" After a Safe Trip.

4.—"Trixie," the Dog Which Flew Twice Across the Continent With the Parson.

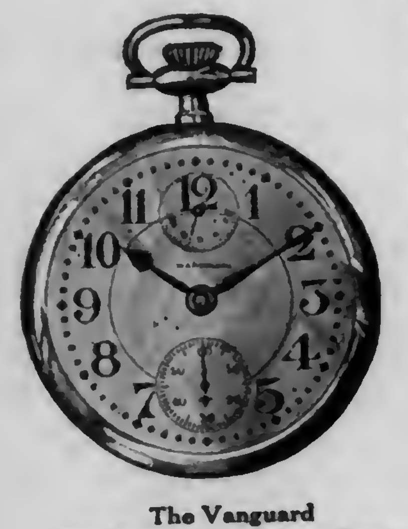
5.—William W. Astor, an Ex-American, Who Recently Died in England.

6.—Pulling Capt. Drayton's Plane Out of the Mud at Chicago.

7.—Building Concrete Houses "While You Wait" in England.

8.—Left to Right: Crewster, Coal Operator; Sec'y of Labor, Wilson; Lewis, Pres. of Miner's Union.

9.—Teaching Amid the Desolation of War Near Kemmel Hill.



WALTHAM
THE
SCIENTIFICALLY
BUILT
WATCH
&
AND
THE
FOREIGN
BUILT
WATCH

Facts You Should Know Before Selecting a Watch

BETWEEN the two supporting plates of a Waltham watch, which together constitute a frame, is mounted a system of gearing, called a Time Train. The reader has learned that the motive power of the watch is derived from the mainspring. At one extremity of the train is a hardened and tempered steel barrel (another Waltham creation) which contains the mainspring. When the thumb and finger wind the mainspring, its stored energy is delivered to the next wheel in the train and from that to the next, and so on.

This train consists of four wheels and pinions. The center wheel is in the exact center of the watch, and directly connected through the cannon pinion (so called because it is shaped like a cannon) with the wheels that control the hour and minute hands; and through this center wheel the power of the mainspring is carried onward through the other wheels of the train to the escape wheel pinion, which we will illustrate in its proper place.

The train of a Waltham watch — each wheel, each pinion — is cut to the fraction of a human hair — mechanically perfect, interchangeable for the serial watches they are made for — standardized in perfection, in absolute exactness and quality, made by machines tuned to infinitesimal gauge-fit and untouched by human hands.

The "train" of the imported watch is made by the old hand process. It is not interchangeable, and it is of varying quality.

This vital part of the Waltham watch is another of those reasons why the horologists of great nations came to Waltham for time, and why your watch selection should be a Waltham.

Waltham placed America First in watchmaking.

This story is continued in a beautiful booklet in which you will find a liberal watch education. Sent free upon request. Waltham Watch Company, Waltham, Mass.

The Vanguard
The World's Finest Railroad Watch
23 jewels
$66 and up

WALTHAM
THE WORLDS WATCH OVER TIME

The Porkiest Porkers You Ever Had

YOU'LL say just that: You'll be so proud you will want to show your hogs to all your neighbors when you use

Cal-Sino

Cal-Sino makes your feed produce more pork in less time; knocks worms; wards off sickness including cholera. Makes even runts thrive and cures most hog diseases. Cal-Sino is made for hogs only. It really costs you nothing to use as it many times over pays for itself. GUARANTEED to satisfy you or your money back.

Mr. George Leman Moyer, Newport, Pa., wrote August 25, 1919;—"My hogs were very rough looking, but within one week after starting Cal-Sino they were looking fine, yet ate less than before. I find it saves about half of the feed. They averaged about 65 lbs. when I got them and now after four months they average 175 lbs. If I had started Cal-Sino at once when I got them I am sure they would weigh still heavier by now."

Send 60c, $1.25 or $2.50 for trial package and name of nearest dealer; subject to refund if you are not satisfied after at least two weeks regular use.

The Cal-Sino Co. Inc.
Dept. H-4, Baltimore, Md.
"Just remember C-S—in the round yellow box.

MARTIN'S TANKAGE
Produces the Big Ones

It takes just as much time to feed good, wholesome tankage as it does the poor kind. And it costs *less* in the end. You can always depend on Martin's Tankage. Only the best of meat scraps, carefully sterilized, are used. Sold with a guarantee. Write for feeding directions and prices.

D. B. MARTIN CO.
36th and Grays Ferry Ave., PHILA.

WITTE
2 H-P. Pulls 2¾

Big Value—Big Surplus power. Immediate Shipment. Offer includes engine on skids—ready to use. Life guarantee against defects.

LOW PRICES—DIRECT

$44.95 Now

Any size—2 to 30 H-P.—Stationary, Portable or Saw-Rig. New book, latest list FREE.—Ed. H. Witte, Pres.

WITTE ENGINE WORKS
2040 Oakland Avenue KANSAS CITY, MO.
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SAWS ANY WOOD IN ANY POSITION ON ANY GROUND 4 in. to 5 ft. Through

1 Man With a Folding Sawing Machine Beats 2 MEN With a Cross-cut Saw
5 to 9 cords daily is the usual average for one man

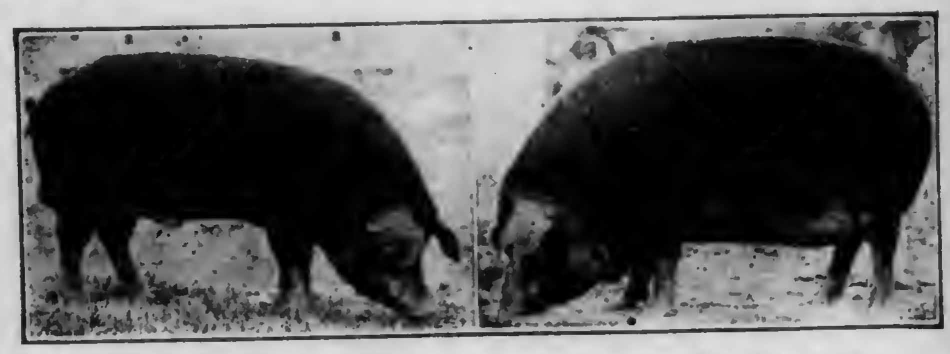
RUNS EASY No Backache — weighs only 45 lbs. — EASILY CARRIED — SAWS DOWN TREES

Our 1920 Model Machine saws faster, runs easier and will last longer than ever. Adjusted in a minute to suit a 12-year-old boy or strongest man. Ask for catalog No. M106 and low price. First order gets agency.
Folding Sawing Mach. Co., 161 W. Harrison St., Chicago, Ill.

CHARACTERISTICS OF THE DUROC-JERSEY HOG

The Duroc-Jersey hog closely resembles the other great pork-producing breeds in size and general conformation. Modern breeders have showed a decided preference for the medium-sized, early-maturing type with fine and strong bone. Deep cherry red is the ideal color, altho some of the best individuals of the breed are rather of a dull red; a few approaching a chestnut hue. Small splashes of black on the belly and legs do not disqualify an animal, but are objectional in the show-ring. Black markings on other parts of the body are objectional in the pure bred herd.

The ideal Duroc-Jersey face is nearly straight, or slightly dished, the snout is of medium length and the ears droop forward much the same as those of the Poland-China. The jowl is heavy, the body deep and wide, and the ham is well-fleshed down to the hock. The legs are short and strong, the bone medium in size, and the body unusually deep for its length. The individuals stand up well under heavy grain feeding, and for that reason the breed has gained popular favor in the great cornbelt states where these qualities are of greater importance than elsewhere.



"Major Sensation"
Grand Champ. Duroc-Jersey Boar at National Swine Show

"Queen of Pathfinder"
Grand Champ. Duroc-Jersey Sow at National Swine Show

Red hogs have been common in certain localities in the United States for many years and there is no authentic history of their origin. Undoubtedly some of the early importations of red hogs and individuals from some of our leading breeds have been used in developing and perfecting the modern Duroc-Jersey. Whatever their origin, a large red breed known as the Jersey Red had attained considerable prominence in New Jersey and other eastern districts. This breed grew to large size, possessed great length of body and other desirable qualities, but was rather deficient in quality and coarse in bone and long in leg. It was valued by many farmers because of size, constitution, rapid growth and great prolificacy.

The Duroc breed originally came from central New York and is said to have originated from the use of Jersey Red males with the sows of that district. It is not known whether these males were imported from England or came from New Jersey. The breeders of Jersey Reds and Durocs eventually blended their herds under the name of Duroc-Jersey and formed a registry association in 1883.

The Duroc-Jersey breed has gained popular favor in the great cornbelt states and in the southern states. Like some of our other breeds of swine there is considerable variation in type, and it is claimed that some breeders have sacrificeed prolificacy and constitution in their efforts to secure early maturity and smoothness. Whether or not this is true the farmer who is seeking desirable qualities for pork production can find individuals that possess the desired characteristics within the breed. The breed is essentially of the lard type and is meeting the demands of the packer in a satisfactory manner. In early maturing qualities and the ability to make economical use of its food the breed has a good reputation. As a grazer it possesses great merit as its skin is less susceptible to blistering with the sun, a fact that is causing it to gain favor in the southern states. When fed under favorable conditions its meat is of fine quality, altho like the Poland-China and Chester White, it is inclined to be rather fat when well-conditioned for market.

The following scale of points and description has been adopted by the American Duroc-Jersey Record: Head and face 4, eyes 2, ears 2, neck 2, jowl 2, shoulders 6, chest 12, back and loin 15, sides and ribs, 8, belly and flank 6, hams and rump 10, legs and feet 10, tail 1, coat 2, color 2, size 5, action and style 4, condition 4, disposition 3, a total of 100 points.

INTERNATIONAL LIVE STOCK EXPOSITION

Frank O. Lowden, war governor of Ilinois, a recognized presidential possibility and an ardent champion of the live stock industry, a charter member of the International Live Stock Exposition and actually engaged in the campaign for the improvement of American live stock, commenting on the present and prospective status of the industry, remarked:

"Twenty years ago when the first International Live Stock Exposition was held at Chicago the institution was no more essential than at this moment. During that two-decade period the industry has been thru a period of evolution; each season has developed new production problems, both in the spheres of breeding and finishing. Foreign competition, especially in the case of beef, has become of serious import, rendering maximum results imperative. A brief era of free grass and cheap grain has passed into the historical stage; making gains with cattle, hogs or sheep has enhanced in cost until even with the new scale of values the industry can be profitably maintained only by intelligent methods

and the lessons annually taught at Chicago during the first week in December therefore possess added import.

"The problem confronting the American live stock grower at this juncture combines economical feeding with improved breeding; therefore, the new departure providing for a comprehensive display of such gains and grass products as are essential to the manufacture of beef, pork and mutton on the farm is a timely innovation. The 'International' has kept pace with every mutation of the industry during its twenty years of educational effort and in the hands of the public-spirited men who chart its course, will continue to discharge that function.

"We have emerged from the period of waste to one of highly intensified, systematic production in which only the fittest can survive if financial results is to be the objective. Feed is more than ever a factor of primary importance to the live stock grower and the new department of the 'International' will rank with the established features of the institution in commanding public interest."

"INTERNATIONAL" NEWS ITEMS

G. I. Christie, of Purdue University, Indiana has been appointed Superintendent of the International Grain and Hay Show to be held in connection with the International Live Stock Exposition, November 29 to December 6.

Prof. Christie has had a wide experience in public work and has been closely identified with the large agricultural movements of the country. He was appointed Assistant Secretary of the United States Department of Agriculture by President Wilson for the period of the war. He has been secretary of the Indiana Corn Growers' Association since 1906, and has conducted annually large and successful Corn Shows. He had charge of the Indiana agricultural exhibit at the Panama Exposition. Prof. Christie is acquainted with the leading grain and hay men of the country and will be able to enlist their cooperation and support for the International Grain and Hay Show.

UTILIZING POOR HAY

In discussing the question of utilizing poor hay we assume it to be hay below the standard of good hay. It may be unpalatable, deficient in nutrients or both. In most instances it is hay damaged in curing. Were ideal weather always prevailing poor hay would be rare. Under actual farming conditions, however, it is often impossible to make good hay. This fact does not help us in utilizing poor hay, but it does afford us with food for thought in making plans for next year's haying season.

Poor hay can not be stored indefinitely, consequently it must be utilized on the farm or sold at prices, usually below its fertilizing value on the farm. In the first place there are some ways in which poor hay should not be used. It seldom pays to feed low grade hay to horses, whether they working or not. If it should prove necessary only small quantities should be fed and sufficient grain feed added to make up the deficiencies in digestible nutrients. Dairy cows, especially the members of the herd giving a maximum flow of milk, can not waste their energes digesting and assimilating poor hay and return a fair profit at the pail.—Warner E. Farver, Tuscarawas Co., Ohio.

Is Every Animal At Its Best?

Don't let your stock lose their Summer's gain through November neglect. Your animals are now going on dry feed — hay and grain.

It's a big change from the succulent, nutritious grasses of summer pastures which supply the needed laxatives and tonics.

Keep your animals' bowels open and regular—drive out the worms—keep their blood rich and keep their digestion good by feeding

Dr. Hess Stock Tonic
A Conditioner and Worm Expeller

Keep your stock up on their appetites. Don't allow them to "get off feed" and in a run-down condition.

Condition your cows for calving by feeding Dr. Hess Stock Tonic before freshing. Then feed it regularly to increase the flow of milk. It lengthens the milking period.

Buy Stock Tonic according to the size of your herd. *Here's a suggestion for your guidance:* Get from your dealer two pounds for each average hog, five pounds for each horse, cow or steer, to start with, feed as directed and then watch results.

Why Pay the Peddler Twice My Price?

You buy Dr. Hess Stock Tonic at an honest price from a responsible dealer in your own town who guarantees it, and who refunds your money if it does not do as claimed.

25-lb. Pail, $2.25; 100-lb. Drum, $7.50
Except in the far West, South and Canada.
Smaller packages in proportion.

DR. HESS & CLARK, Ashland, Ohio

GILBERT HESS, M.D., D.V.S.

Dr. Hess Poultry PAN-A-CE-A
Will Start Your Pullets and Moulted Hens to Laying

Dr. Hess Instant Louse Killer Kills Lice

This Feeder Prevents Waste

You can market top-price hogs in a shorter time on less feed with the BLU-BAR self feeder. The agitators bring down feed just as the hog can eat it.

Individual adjusters insure the proper flow of any feed used—coarse or fine. Three bins allow variety in the ration. Troughs built so that it's impossible to eat with feet in the feed—no contamination—no dragging feed out. The

BLU-BAR HOG FEEDER

is now saving feed and time for hundreds of farmers. Built in three sizes for 40 to 200 hogs — and each size large for the price. A postal will bring you full information.

The Blu-Bar Mfg. Co.
Dept. E
SYCAMORE, OHIO

Patented Dec. 1912--May 1917

Railway Mail Clerk Examination
Soon. Prepare for this. Also Rural Carrier, Customs, Internal Revenue, Departmental and other examinations. Free booklet OM. PATTERSON CIVIL SERVICE SCHOOL, Rochester, N. Y.

WANTED by young man with lifetime experience, small farm to work on shares. Have team of horses. Would be willing ot take part of large farm. Prefer Northern Delaware or Northeast Maryland. Address Box 25, Pa. Farmer, Phila.

PUBLIC SALE OF BERKSHIRES
Saturday, November 29, 1919
At ANNVILLE, LEBANON CO., PA.

At the old Kreider Homestead, 3 miles southwest of Annville, 2 miles southeast of Palmyra and 2 miles northeast of Campbelltown.

Entire Herd of Purebred and Highgrade Berkshire Hogs

My herd of purebred Berkshires contains the best developed and most popular blood lines of the Berkshire breed; such as, Masterpiece, Superbus, Grand Leader 2nd, Meadowview Longfellow 4th, Triune, Highwood Improver, etc.

The individuals in my herd have the great depth, the spring of rib, strong back, good straight heavy boned legs; in fact, all those desirable qualities which characterize the Berkshire breed.

Purebred hogs bought by a purchaser from a distance will be crated and deliveced to R. R. Station free of charge.

Annville is situated along the Phila. & Reading R. R. between Harrisburg and Reading. Eastbound trains arriving at Annville at 10.59 A. M. and Westbound trains arriving at Annville at 11.17 A. M. will be met and intending purchasers taken to sale.

Sale begins at 1 o'clock P. M. Sharp. Terms of sale are cash.

HOWARD B. KREIDER,
Annville, Pa.

S. S. BOMBERGER, Lebanon, Pa., Auctioneer.

HAY
W. D. POWER & CO. 601 W. 33 St., New York, are the largest handlers of commission hay in greater New York; if you have hay to dispose of communicate with them.
HAY

PIPE second hand. Large stock all sizes furnished with new threads & couplings. Prompt shipment. J F Griffith 416 M yer St. Phila.

KEZIAH COFFIN

By JOSEPH C. LINCOLN

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SYNOPSIS

Keziah Coffin, a good-natured widow, is packing up to leave the fishing village to go to Boston, her brother having died and left her alone. Grace Von Horne, ward of Eben Hammond and young friend of Keziah, is assisting her. They are discussing the coming of the new minister for the "Regular" Church, to which denomination Keziah belongs. Grace is a member of the "Come-Outers," a rival set. Between the two a jealous rivalry exists. Eben Hammond calls and induces Keziah to become housekeeper for the new and single minister. She accepts and Grace goes with her to prepare the house for his coming. The new minister arrives and he and Keziah become friends at once. Keziah proceeds to make him acquainted with local conditions—especially the strained relations between the two sects. Mrs. Coffin advises him that if he wishes to steer an easy course he must recognize the "classes" of the community, and also not to fraternize with the "Come-Outers." In spite of the warning he visits the "Come-Outer" meeting one evening, is recognized and is preached at and prayed for. Grace Van Horne and the Minister meet after the meeting in a rainstorm and he sees her home. The "Packet" arrives in port, bearing Nat, the girlhood lover of Keziah.

The minister shut the door behind his departing guests. Then he went out into the kitchen, whither the housekeeper had preceded him. He found her standing on the back step, looking across the fields. The wash bench was untenanted.

"Hum!" mused Ellery thoughtfully, "that was a good story of Captain Mayo's. This man Hammond must be a fine chap. I should like to meet him."

Keziah still looked away over the fields. She did not wish her employer to see her face—just then.

"I thought you would meet him," she said. "He was here a little while ago and I asked him to wait. I guess Zeb's yarn was too much for him; he doesn't like to be praised."

"So? Was he here? At the Regular parsonage? I'm surprised."

"He and I have known each other for a long while."

"Well, I'm sorry he's gone. I think I should like him."

Keziah turned from the door.

"I know you would," she said.

CHAPTER VII

In Which Captain Nat Picks Up a Derelict

It is probable that John Ellery never fully realized the debt of gratitude he owed to the fog and the squall and to Captain Nat Hammond. Trumet, always hungry for a sensation, would have thoroly enjoyed arguing and quarreling over the minister's visit to Come-Outer meeting, and, during the fracas, Keziah's parson might have been more or less battered. But Captain Nat's brilliant piloting of the old packet was a bit of seamanship which every man and woman on that foam-bordered stretch of sand could understand and appreciate, and the minister's indiscretion was all but forgotten in consequence.

As for the Come-Outers, they professed to believe that their leader had much the best of the encounter, so they were satisfied. There was a note of triumph and exultation in "testimony" given on the following Thursday night and Captain Eben divided his own discourse between thankfulness for his son's safe return and glorification at the discomfiture of the false prophets. Practically, then, the result of Ellery's peace overture was an increased bitterness in the feeling between the two societies and a polishing of weapons on both sides.

The flats fascinated the young minister, as they have many another visitor to the Cape, before or since. On cloudy days they lowered with a dull, leaden luster and the weed-grown portions were like the dark squares on a checkerboard, while the deep water beyond the outer bar was steely gray and angry. When the sun shone and the wind blew clear from the northwest the whole expanse flashed into fire and color, sapphire blue, emerald green, topaz yellow, dotted with white shells and ablaze with diamond sparkles where the reflected light leaped from the flint crystals of the wet, coarse sand.

The best time to visit the flats—tide serving, of course—is the early morning at sunrise. Then there is an inspiration in the wide expanse, a snap and tang and joy in the air. Ellery has made up his mind to take a before-breakfast tramp to the outer bar and so arose at five, tucked a borrowed pair of fisherman's boots beneath his arm, and, without saying anything to his housekeeper, walked down the lawn behind the parsonage, climbed the rail fence, and "cut across lots" to the pine grove on the bluff. There he removed his shoes, put on the boots, wallowed thru the mealy yellow sand forming the slope of the bluff, and came out on the white beach and the inner edge of the flats. Then he plashed on, bound out to where the fish weirs stood, like webby fences, in the distance.

A cart, drawn by a plodding horse and with a single individual on its high seat, was moving out from behind the breakwater. Some fisherman driving out his weir, probably.

The minister had been on the bar a considerable time before he began to think of returning to the shore. He was hungry, but was enjoying himself too well to mind. The flats were all his that morning. Only the cart and its driver were in sight and they were half a mile off. He looked at his watch, sighed, and reluctantly started to walk toward the town; he mustn't keep Mrs. Coffin's breakfast waiting too long.

The first channel he came to was considerably deeper than when he forded it on the way out. He noticed this, but only vaguely. The next however, was so deep that the water splashed in at the top of one of his boots. He did notice that, because tho he was not wearing his best clothes, he was not anxious to wet his "other ones." The extent of his wardrobe was in keeping with the size of his salary.

And the third channel was so wide and deep that he saw at once it could not be forded, unless he was willing to plunge above his waist. This was provoking. Now he realized that he had waited too long. The tide had been flowing for almost an hour; it had flowed fast and, as he should have remembered, having been told, the principal channels were eight feet deep before the high-set flats were covered.

He was in for a wetting, that was sure. However, there was no help for it, so he waded in. The water filled his boots there, it gurgled about his hips, and beyond, as he could see, it seemed to grow deeper and deeper. The current was surprisingly strong; he found it difficult to keep his footing in the soft sand. It looked as tho he must swim for it, and to swim in that tide would be no joke.

Then, from behind him, came a hail. He turned and saw moving toward him thru the shallow water now covering the flat beyond the next channel, the cart he had seen leave the shore by the packet wharf, and, later, on the outer bar. The horse was jogging along, miniature geysers spouting beneath its hoofs. The driver waved to him.

"Hold on, mate," he called. "Belay there. Stay where you are. I'll be alongside in a shake. Git dap, January!"

Ellery waded back to meet this welcome arrival. The horse plunged into the next channel, surged thru it, and emerged dripping. The driver pulled the animal into a walk.

"Say," he cried, "I'm cruisin' your way; better get aboard, hadn't you? There's kind of a heavy dew this mornin'. Whoa, Bill!"

"Bill" or "January" stopped with apparent willingness. The driver leaped down and extended a hand. The minister took it and was pulled up to the seat.

"Whew!" he panted. "I'm much obliged to you. I guess you saved me from a ducking, if nothing worse."

"Yes," was the answer, "I wouldn't wonder if I did. This ain't Saturday night and 'twould be against Trumet principles to take a bath any other time. All taut, are you? Good enough! then we'll get under way." He flapped the reins and added, "G'long, Julius Caesar!"

The horse, a sturdy, sedate beast to whom all names seemed to be alike, picked up his feet and pounded them down again. Showers of spray flew about the heads of the pair on the seat.

"I ain't so sure about that duckin'," commented the rescuer. "Hum! I guess likely we'll be out of soundin's if we tackle that sink hole you was undertakin' to navigate. Let's try it a little further down."

Ellery looked his companion over.

"Well," he observed with a smile, "from what I've heard of you, Captain Hammond, I rather guess you could navigate almost any water in this locality and in all sorts of weather."

The driver turned in surprise.

"So?" he excaimed. "You know me, do you? That's funny. I was tryin' to locate you, but I ain't been able to. You ain't a Trumetite, I'll bet on that."

"Yes, I am."

"Tut! tut! tut! you don't tell me. Say, shipmate, you hurt my pride. I did think there wa'n't a soul that ever trod sand in this village that I couldn't name on sight, and give the port they hailed from the names of their owners. But you're got me on my beam ends. And yet you knew me."

"Of course I did. Everybody knows the man that brought the packet home."

Nat Hammond sniffed impatiently.

"I'm—hm!" he grunted. "I cal'late everybody does, and knows a lot more about that foolishness than I do myself. If ever a craft was steered by guess and by godfrey, 'twas that old hooker of Zach's t'other night. Well—Humph! here's another piece of pilotin' that bids fair to be a mighty sight harder. Heave ahead, Hannibal! hope you've got your web feet with you."

They had moved along the hedge of the flat a short distance and now turned into the channel. The horse was wading above its knees; soon the water reached its belly and began to flow into the body of the cart.

"Pick up your feet, shpmate," commanded Nat. "You may get rheumatiz if you don't. This'll be a treat for those sea clams back in that bucket amidships. They'll think I've repented and have decided to turn 'em loose again. They don't know how long I've been countin' on a sea-clam pie. I'll fetch those clams ashore if I have to lug 'em with my teeth. Steady, all hands! we're off the ways."

The cart was afloat. The horse, finding wading more difficult than swimming, began to swim.

"Now I'm skipper again, sure enough," remarked Hammond. "Ain't gettin' seasick, are you?"

The minister laughed.

"No," he said.

"Good! she keeps on a fairly even keel, considerin' her build. There she strikes! That'll do, January! you needn't try for a record voyage. Walkin's more in your line than playin' steamboat. We're over the worst of it now. Say! you and I didn't head for port any too soon, did we?"

"No, I should say not. I ought to have known better than to wait out there so long. I've been warned about this tide. I——"

"S-sh-sh! You ought to have known better! What do you think of me? Born and brought up within sight and smell of this salt puddle and let myself in for a scrape like this! But it was so mighty fine off there on the bar I couldn't bear to leave it. I always said that goin' to sea on land would be the ideal way, and now I've tried it. But you took bigger chances than I did. Are you a good swimmer?"

"Not too good. I hardly know what might have happened if you hadn't——"

"S-sh-sh! that's all right. Always glad to pick up a derelict, may be a chance for salvage, you know. Here's the last channel and it's an easy one. There! now it's plain sailin' for dry ground."

The old horse, breathing heavily from his exertions, trotted over the stretch of yet uncovered flats and soon mounted the slope of the beach. The minister prepared to alight.

"Captain Hammond," he said, "you haven't asked me my name."

"No, I seldom do more'n once. There have been times when I'd just as soon cruise without too big letters alongside my figurehead."

"Well, my name is Ellery."

"Hey? What? Oh, ho! ho! ho!"

He rocked back and forth on the seat. The minister's feelings were a bit hurt, tho he tried not to show it.

"You mustn't mind my laughn'," explained Nat, still chuckling. "It ain't at you. It's just because I was wonderin' what you'd look like if I should meet you and now—Ho! ho! You see, Mr. Ellery, I've heard of you, same as you said you'd heard of me."

Ellery smiled, but not too broadly.

"Yes," he admitted, "I imagined you had."

"Yes, seems to me dad mentioned your name once or twice. As much as that, anyhow. Wonder what he'd say if he knew his son had been takin' you for a mornin' ride?"

"Probably that it would have been much better to have left me where you found me."

The captain's jolly face grew serious.

"No, no!" he protested. "Not so bad as that. Dad wouldn't drown anybody, not even a Regular minister. He's a pretty square-built old craft, even tho his spiritual chart may be laid out different from yours—and mine."

"From yours? Why, I supposed——"

"Yes, I know. Well, when I go to meetin', I generally go to the chapel to please father. But when it comes right down to a confession of faith, I'm pretty broad in the beam. Maybe I'd be too broad even for you, Mr. Ellery."

The minister, who had jumped to the ground, looked up.

"Captain Hammond," he said, "I'm very glod indeed that I met you. Not alone because you helped me out of a bad scrape; I realize how bad it might have been and that——"

"Shsh! shh! Nothin' at all. Don't be foolish."

"But I'm glad, too, because I've heard so many good things about you that I was sure you must be worth knowing. I hope you won't believe I went to your father's meeting with any————"

"No, no! Jumpin Moses, man! I don't find fault with you for that. I understand, I guess."

"Well, if you don't mind the fact that I am what I am, I'd like to shake hands with you."

Nat reached down a big brown hand.

"Same here," he said. "Always glad to shake with a chap as well recommended as you are. Yes, indeed, I mean it. You see, you've got a friend that's a friend of mine, and when she guarantees a man to be A. B., I'll ship him without any more questions."

"Well, then, good-by. I hope we shall meet again and often. And I certainly thank you for——"

'That's all right. Maybe you'll fish me out of the drink some day; you never can tell. So long! Git dap, Gen'ral Scott!"

He drove off up the beach, but before he turned the corner of the nearest dune he called back over his shoulder:

"Say, Mr. Ellery, if you think of it you might give my regards to—to—er—that lady that's keepin' house for you."

Breakfast had waited nearly an hour when the minister reached home. Keziah, also, was waiting and evidently much relieved at his safe arrival.

"Sakes alive!" she exclaimed, as she met him at the back door. "Where in the world have you been, Mr. Ellery? Soakin' wet again, too!"

Ellery replied that he had been for a walk out to the bar. He sat down on the step to remove the borrowed boots. A small rivulet of salt water poured from each as he pulled them off.

"For a walk! A swim, you mean. How could you get in up to your waist if you just walked? Did you fall down?"

"Not, not exactly. But I waited too long and the tide headed me off."

"Mercy on us! you mustn't take chances on that tide. If you'd told me you was goin,' I'd have warned you to hurry back."

"Oh, I've been warned often enough. I was my own falt, as usual. I'm not sure that I don't need a guardian."

"Humph! well, I ain't sure either. Was the channels very deep?"

"Deep enough. The fact is, that I might have got into serious trouble if I hadn't been picked up."

He told briefly the story of his morning's adventure. The housekeeper listened with growing excitement.

"Heavens to Betsy!" she interupted. "Was the channel you planned to swim the one at the end of the flat by the longest weir leader?"

"Yes."

"My soul! there's been two men drowned in that very place at half tide. And they were good swimmers. After this I shan't dare let you out of my sight."

"So? Was it as risky as that? Why, Captain Hammond didn't tell me so. I must owe him more even than I thought."

"Yes, I guess you do. He wouldn't tell you, tho; that ain't his way. Deary me! for what we've received let us be thankful. And that reminds me that biscuits ought to be et when they're first made, not after they've been dried up on the back of the stove forever and ever amen. Go on and change those wet things of yours and then we'll eat. Tryin' to swim the main channel on the flood! My soul and body!"

"Captain Nat sent his regards to you, Mrs. Coffin," said the minister, moving toward the stairs.

"Did, hey?" was the housekeeper's reply. "Want to know!"

CHAPTER VIII

In Which the Parson and Mr. Pepper Declare Their Independence

That afternoon, when dinner was over, the Reverend John decided to make a few duty calls. The first of these he determined should be on the Peppers. Lavinia and her brother had called at the parsonage several times, but as yet he had not paid them a visit. It was not a ceremony to which he looked forward with delight, but it must be performed. Miss Pepper had hinted several times, at sewing circle and after prayer meeting, of "partiality" and "only stoppin' in where they had fancy curtains up to the windows." So, as it could not be put off longer, without causing trouble, he determined to go through with it.

The Pepper house was situated just off the main road on the lane leading over the dunes to the ocean and the light. It was a small building, its white paint dingy and storm beaten, and its little fenced-in front yard dotted thickly with clumps of silver-leaf saplings. A sign, nailed crookedly on a post, informed those seeking such information that within was to be found "Abishai G. W. Pepper, Tax Collector, Assessor, Boots and Shoes Repaired." And beneath this was fastened a shingle with the chalked notice, "Salt Hay for sale."

The boot and shoe portion of the first sign was a relic of other days. Kyan had been a cobbler once, but it is discouraging to wait three or four weeks while the pair of boots one has left to be resoled are forgotten in a corner. Captain Zeb Mayo's pointed comment, "I want my shoe leather to wear while I'm alive, not to be laid out in after I die of old age," expressed the general feeling of the village and explained why custom had left Mr. Pepper and flown to the more enterprising shoemaker at "The Corners." The tax collectorship might have followed it, but here Lavinia kept her brother up to the mark. She went with him on his rounds and it gave her opportunity to visit, and afterwards comment upon, every family in town.

(Continued Next Week.)

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Markets

PHILADELPHIA PRODUCE

Philadelphia, Pa., Nov. 10, 1919.

Potatoes have been arriving very freely during the past week but there has been a very active demand and movement and the market is showing very little change from the prices quoted in these columns last week. There were in the neighborhood of 160 cars of potatoes on track in the various yards at the opening of business today. The Pennsylvania potatoes are selling mostly from $2.65@2.90 per cwt., with some extra fancies bringing a premium over these prices. The New York State stock is possibly a little lower than it was a week ago with sales ranging generally from $2.25@2.50 per cwt. In the sack stock the New Jersey Giants are selling to a little better advantage best bringing today $3.75 per 150-lb. sacks, with other grades from $3.60@3.65 and No. 2's at $2.25@2.50. The round stock in 150-lb. sacks, remains practically unchanged at $4@4.10 per sack. The Eastern Shore second crop is now arriving quite freely and prices showing little or no change from last week's quotations, the Hoosiers bringing from $3.50@3.75 per barrel and the white skins from $4@4.25. The potatoes hauled in by the nearby farmers are steady at 90c@$1.10 mostly, with a few extra fancy a little higher.

Sweet potatoes have taken quite an advance during the past week. The nearby New Jersey grown sweets are now selling generally from $1@1.25 per ⅝ basket with some fancy house or storage sweets around $1.40 per ⅝-basket. No. 2's are selling from 40@65c per ⅝-basket. The Eastern Shore stock in barrels are from 50c@75c per barrel higher the sales ranging today from $3.75@4.25. Southern yams shows an advance of about 25 cents per barrel, best stock now bringing from $3@3.50.

Vegetables

Green Beans are now in light supply most of the limited arrivals coming from South Carolina. These are selling from $2.50@3.50 per hamper. A few from Florida sold at the same price. Wax beans are scarcer than the green beans but sell at about the same range in price. There has been quite an advance in nearby grown bunch beets during the past week and sales are now ranging from $3.50@5 pr 100 bunchs. Loose beets on the other hand are rather dull at $1.50@2.25 per barrel. Brussels sprouts are not very plentiful and the market is higher, 20@22c per quart being the prevailing price. There has been a sharp advance in the cabbage market since our last report, and $40 per ton was reached for best Danish. The advance in price has brought out increased supplies so that now a reaction has set in and an easier tone is prevailing. At this writing Danish cabbage is selling at $32@35 per ton, and Domestic at $25@28. Nearby carrots are firmer and alittle higher, loose stock in barrels now selling at $2.25@3.25 per barrel while the bunch carrots bring 2@3c per bunch. Cauliflower is showing very ordinary quality and for this reason the market is weak with sales ranging from $1.50@3 per crate for the Western New York stock. Fancy celery is firm at 35@65c per bunch for the washed stock while the New York State rough celery sells from $3@4 per crate. Cucumbers are scarce and readily bring from $3.50@5 per box. Egg plants are also in light supply and when showing good quality readily bring $4.50@5.50 per box. Garlic remains steady and unchanged at 20@30c per lb. Horseradish is scarce and easily worth $7@10 per barrel. Fancy New York state lettuce, continues firm and active at $2@3 per box, with the hamper bringing from $1.50@3.25. The Iceberg lettuce is showing poor quality and most sales are around $4 per box, altho strictly fancy probably would exceed $5. Fancy lima beans are selling from $3@3.50 per basket. Mushrooms show a big advance over last week's prices and $2.50@3.25 is readily obtained for fancy stock in 3-lb. baskets. Okra is scarce and some fancy sold at $3@4 per crate. The cold weather stimulated the onion market and prices are fully 50 cents per sack higher than they were a week ago, sales ranging today from $3.75@4.50 per sack. A car of white boiling onions sold this morning at $3.25 per bushel crate. Parsley is about steady at 75c@$1.25 per hamper. There are no peas here. Fancy peppers are scarce. The nearby stock is selling all the way from 50c@$1 per basket with fancy Southern from $1.75@2.50 per crate. Romaine is steady at the unchanged price of $1.25@1.50 per box. Radishes are in light supply but slow, a wide range in quality best being in good demand at 2 cents per bunch while poor are hard to sell at 1c. The season on nearby tomatoes is at an end. The few that are arriving show such irregular quality that we omit quotations. There was a car of tomatoes from California this morning which sold at $3 per lug. Some Florida are beginning to make their appearance but show mostly too green a condition. Hot house tomatoes are firmer and higher, best selling at 30@32½c per lb., with the No. 2's at 20@25c. Parsnips are rather scarce and worth from $2.50@3.25 per barrel. White turnips show a very wide range in quality and condition and sales are being made all the way from 15@40c per basket. The New Jersey yellow turnips are in light supply and steady at 65c@$1 per ⅝-basket. There have been 3 or 4 cars of the large Canadian rutabagas here which are selling from $1.75@1.90 per cwt. New Jersey spinach is about steady at 40@65c as to quality.

Fruits

There has been a continued strong active demand for apples and the market continues to rule firm and active on all grades with strictly fancy apples possibly a little higher than they were a week ago. Pears are in light supply but as the trade does not appear to want pears very badly, and as nearly all the offerings are showing more or less weakness, prices are showing no improvement. The season on grapes is at an end there only being one or two cars here at this time and when these are gone the season will be over. The holders of these grapes, however, are holding them firm at much higher prices than were prevailing a week ago. At this writing sales of the various kinds of fruits are being made at about the following range of prices. Apples, barrels: Baldwins, $5@8.50; Ben Davis, $3.50@6.25; Black Twigs, $3.50@7.50; Ganos, $4@6.25; Greenings, $5.50@8.50; Extra Fancy, $9; Kings, $5.50@8.50; York Imperials, $3.50@7.50; Twenty Ounce, $6@8; Stayman Winesaps, $7.50@8; Hubbardsons, $4.75@7.50; other various varieties, $4@7.50.

Poultry

The market on fancy heavy live fowls is firmer and 1@2c per lb. higher than it was a week ago. Many of the supplies, however, are coming in poor condition, being thin and otherwise unattractive and the market in this class of stock is low and irregular. Supplies of ducks, geese and turkeys are moderate and the market shows no noticeable change. At this writing prices on live poultry are about as follows: Live fowls: heavy, 35@37c; inferior, 27@34c; fancy chickens, 30@34c; inferior, 24@28c; roosters, 21@24c; ducks, 28@34c; geese, 26@30c; turkeys, 33@38c.

Eggs

The supplies of eggs continue light and the market is ruling firm and active with the offerings cleaning up from day to day. While prices are quoted as practically unchanged, we wish to make a special notice of the fact that a premium is being paid on strictly fancy, well known marks of nearby eggs. Quotations range as follows: Nearby current receipts, 65c; nearby firsts, 67@70c; western firsts, 63@65c; Western extra firsts 67c.

LANCASTER PRODUCE MARKETS

Lancaster, Pa., Nov. 10, 1919.

Other than a two-cent drop in the majority of pork products on the stands of county butchers, few changes were made in produce quotations here today, altho the egg market was firmer and remained at 80 cents per dozen throut the trading. Eggs which could not command that price were returned to the farm.

Butter and Eggs.—Creamery butter, 75c per lb.; country butter, 75c. Fresh eggs, 80c per dozen; duck eggs, 60c; goose eggs, 10c each.

Poultry.—Dressed old chickens, $1.25@1.75 each; dressed young chickens, 85c@$1.30 each.

Vegetables.—Beets, 5c per bunch; beans, 10@12c ½ peck; tomatoes, 10@15c box; lima beans, 20c quart; cabbage, 5@10c hd.; sweet potatoes, 35c ½ peck; potatoes, $1.65@1.75 bu.; do., 25@30c ½ peck; turnips, 15c ½ peck; spinach, 20c ½ peck; lettuce, 15@20c head.

Fruit.—Apples, 40@50c ½ peck; pears, 20@25c ½ peck.

Grain Market.—Wheat, $2.20 per bu.; corn, $1.05; oats, 75c; rye, $1.60. Timothy hay, $28 per ton; mixed hay, $26; wheat straw, $11; oat straw, $10.

YORK PRODUCE MARKETS

York, Pa., Nov. 10, 1919.

The markets are unsettled. Much produce is very short yet the price would indicate an abundance. Eggs and butter are firm with all other lines of produce at a standstill.

Apples are expected to be much lower than now, yet we cannot see how this can be considering the prices paid in the orchards.

Eggs, 75@78c pr dozen.

Butter.—Country, 60@65c lb.; separator, 65@70c lb.; milk, 10c quart.

Poultry.—Hens, 22@24c lb.; springers, 24c lb.; dressed, 75c@$1.75 each.

Vegetables.—Potatoes, 15@25c ½ peck; $1.50 bu.; cabbage, 3@8c head; lettuce, 2@4c head; beets, 5c box; radishes, 5c bunch; onions, 5c bunch; 15@20c ½ peck; lima beans, 15@25c quart; soup beans, 15@20c quart; celery, 3@8c stalk; lard, 38@42c pound; turnips, 10@12c ½ peck; spinach, 10c ½ peck; applebutter, 45@50c quart.

Fruits.—Apples, 15@50c ½ peck, $2@3; per bushel; pears 10c box; 15c ½ peck; quinces, 5@10c each.

Retail Grain Market.—Wheat, $2.40; corn, $2; oats, $1; rye, $1.08; bran, $3 per cwt.; middlings, $3.50 cwt.

Wholesale Grain Market.—Wheat, $2.20; corn, $1.60; oats, 90c; rye, $1.45; bran, $47 per ton; middlings, $68 per ton.

BALTIMORE PRODUCE

Baltimore, Md., Nov. 10, 1919.

Butter.—Creamery, western fancy, 69@70c; choice, 68@69c pound prints, 70@71c. Nearby rolls, 45@46c; Dairy prints, 45@46c.

Eggs.—State, Pennsylvania and nearby, 65@66c. Eastern Shore and Virginia, 65@66c. Southern, 62@63c.

Live Poultry.—Springers, 30c pound; old roosters, 20@21c; old hens, 30c lb.; ducks young, 28@30c; do., poor, 24@25c; guinea fowls, 90c@$1.00.

Grains.—Bag lots by sample, $2.18@2.32. wheat, new, No. 1 red, $2.30 do., No. 3, $2.32; garlicky, $2.18; Corn, $1.50 Oats, standard white, 80@81c; rye, nearby, $1@1.50.

Hay.—No. 1 timothy, $31.50 ton; do., standard, $30.50 ton; light clover, mixed, $29@30 ton. Clover, mixed, $27@28. Tangled rye straw, $14.50. Wheat straw, $12@13. Oat straw, $14@15 ton.

Western Spring Bran, per ton, in 100-pound sacks, $42@43; City Mills Winter Bran, per ton, in 100-pound sacks, $50; brown middlings, per ton, in 100-pound sacks, $55; white middlings, per ton, in 80-pound sacks, $67. Quotations on City Mills feeds are jobbing prices.

NEW YORK PRODUCE

New York City, Nov. 10, 1919.

Butter.—Steady; receipts, 8,462 tubs; creamery, higher than extras, 70@70½c; creamery, extras, 92 score, 69@69½c; firsts, 61@68½c; packing stock, current make, No. 2, 47@47½c.

Eggs.—Irregular; receipts 8,628 cases; fresh-gathered extras, 71@72c; extra firsts, 67@70c; firsts, 61@66c; state, Pennsylvania and nearby western hennery whites, fine to fancy, 95c@$1; state, Pennsylvania and nearby hennery whites ordinary to prime, 75@94c; state, Pennsylvania and nearby hennery browns, 75@78c; do gathered browns and mixed colors, 71@72c.

Cheese.—Firm receipts, 5,171 boxes; state whole-milk flats, current make specials, 32½@33c; do., average run, 31½@32½c; state whole-milk twins, current make specials, 31½@32c; do., average run 31c.

Poultry.—Live steady; chickens 26@27c; fowls, 19@30c; old roosters, 20c; turkeys, 35c; dressed steady; fowls, 24@36c; old roosters, 21@22c; chickens, 24@45c; turkeys, 35@46c.

Vegetables.—Potatoes, Long Island, $5@5.50 per 165-lb. bag; Jersey No. 1, $3.50@4.50 bag. Beans, green, $1@4 basket; do., lima, $2@4.50 basket. Beets, $2@2.50 per barrel. Carrots, $1@2 per bbl. Cabbage, $3@7 per 100. Lettuce, 50c@$2.50 basket. Tomatoes, $1@2 per bushel. New Jersey, $1@2 carrier.

Fruit.—Apples, McIntosh, $5@13; Wealthy, $4.50@6.50. Baldwins, $4@7.50; Northern Spy, $4@9.

PITTSBURGH PRODUCE

Pittsburgh, Pa., Nov. 10, 1919.

Butter.—Creamery, 73c; tub, 72c; cooking, 56@57c; nearby dairy, 68@69c.

Cheese.—New York full cream, 35@36c. Ohio, 34@34½c. Wisconsin, Swiss, 54@55c. Philadelphia cream $1.60 per dozen.

Eggs.—Fresh select, 70@72c. Candled storage 55@57c. Storage, 52@53c.

Potatoes.—Round, $4@4.50 per 150 lb sack. Onions, $4.50@6 sack. Cabbage, $1@1.25 bushel. Lettuce, New York, $2.50@3 box. Sweet potatoes, $4@4.25 barrel. Cauliflower, $3@3.25 bushel. Turnips, $1.75@2 bu. Celery, 35@50c dozen. Beans, wax and green, $3@3.25 bushel. Squash, 90c@$1 bushel. Beets, new, 20@30c doz.

Fruit.—Apples, $1.50@2.50 bushel. Quinces, $2.25@2.75 bushel. Grapes New York state 4-quart basket, 38@40c. Chestnuts, 15c pound.

LIVESTOCK

Lancaster, Pa., Nov. 10.—Cattle.—Receipts, 4,863 head, against 5,910 head last Monday. Market dull, but prices steady; good to prime steers, $14.25@16; medium to good steers, $12.75@14.25; common to medium steers, $10@12.75; choice to prime heifers, $12.50@13.25; good to choice heifers, $11.25@12.50; fair to good heifers, $10@11.25; common kinds, $7.50@9; good to prime cows, $9@11.50; fair to good cows, $7@9; medium to fair cows, $6@7; common to medium cows, $4@6; good to choice bulls, $10@11.50; fair to good bulls, $8@10; common to medium bulls, $6.50@8; good to choice oxen, $10@12; fair to good oxen, $8@10; common to medium oxen, $6@8; calves, $14@16; choice, calves, $14@20; good feeding steers, $12@13.25; common feeders, $8@10.50; good stocker steers, $10@11.50; common kinds, $6@7.75; good stock heifers, $9@10; common grade, $6@7.50.

Hogs.—Receipts, 560 head; market fairly active; prices steady; good to prime, $15.50@16.25; light to medium, $14@15; roughs, $13.50@14; stags to sows, $12@13.

Chicago, Ill.—Hogs.—Receipts, 38,000; estimated tomorrow, 45,000; steady to 15c higher; bulk, $14.90@15.40; top, $15.50; heavy, $15.10@15.40; medium, $15.10@15.50; light, $15.10@15.40; light lights, $14.85@15.25; heavy packing sows, smooth, $14.75@15; packing sows, rough, $14.40@14.75; pigs, $14.65@15.10. Cattle.—Receipts, 31,000; estimated tomorrow, 15,000, firm; beef steers, medium and heavyweight, choice and prime, $17.75@17.90; medium and good, $10.85@17.75; common, $8.65@10.85; light weight, good to choice, $14.25@19.75; common and medium, $7.75@14.25; butcher cattle, heifers, $6@14.50; cows, $6.50@13; canners and cutters, $5.50@6.50; veal calves, $17.50@18.50; feeder steers, $7@13; stocker steers, $6@10.25; Western range steers, $7.50@15.25; cows and heifers, $6.50@12.50. Sheep.—Receipts, 48,000; estimated tomorrow, 25,000; unsettled; lambs, $12@14.60; culls and common, $8.50@11.75; ewes, medium, good and choice, $6.75@8.25; culls and common, $3@6.50; breeding, $6.50@11.75.

East Buffalo, N. Y., Nov. 10.—Cattle.—Receipts, 6,600; active, good, 25@50c higher; common, steady; prime steers, $16.50@17; shipping steers, $15.50@16; butchers, $10@15; yearlings, $14@15; heifers, $6@$12; cows, $4.50@10.75; bulls, $6.50@10.50; stockers and feeders, $6@10.25; fresh cows and springers, $65@$170; calves, receipts, 1,800; steady, $5@19.

Hogs.—Receipts, 17,600; steady, heavy, mixed yorkers, light do., and pigs, $15.50; roughs, $13@13.25; stags, $9@11.50. Sheep and Lambs.—Receipts, 15,000; lambs, 25c lower; lambs, $8@14.25; yearlings, $7@10.50; wethers, $9@9.50; ewes, $3@8; mixed sheep, $8.25@8.75.

Eastern Hog Markets.—Buffalo.—Steady, —$15.25@15.75; $15.50@15.60.

Pittsburgh.—Slow and Lower.—$15@15.70; $15@16.

PHILADELPHIA HAY AND GRAIN

Philadelphia, Pa., Nov. 10, 1919.

Baled Hay and Straw.—Receipts, 108 tons of hay and 4 cars of straw. The better grades firmly held. Timothy hay, No. 1, $32; exceptional lots higher. No. 2, $28@30; No. 3, $24@27; clover-mixed hay, light mixed, $28@30; No. 1 mixed, $26@27; straw, No. 1 straight rye, $14.50@15; No. 2 do., $13@13.50; No. 1 tangled rye, $14; No. 2 do., $12.50@13; No. 1 wheat straw, $13.50@14; No. 2 do., $12.50@13; No. 1 oat straw, $14.50@15; No. 2 do., $12.50@13.

Bran.—Quiet but steady. We quote: Car lots, to arrive, including sacks: Soft winter bran, western, in 100-lb. sacks, per ton $46@47; spring bran, in 100-lb. sacks, per ton, $45@46.

NEW YORK HAY AND GRAIN

New York City, Nov. 10, 1919.

Feed.—The market for mill feed developed a somewhat stiffer tone toward the close of last week due largely to less pressure to sell. Large quantities of feed are believed to be owned by commission houses and jobbers, and while a short time ago there was a sharp increase in offerings owing to nervousness over the outlook holders were later more confident of their position.

Quotations: City feed bran $44; middlings $54 in 100-pound sacks; red dog, $69, nominal, in 100-pound sacks; Western spring bran, $44.50@45; standard middlings, $50; flour middlings $50; red dog $69 all in 100-pound sacks, 30 day shipment. Oat feed $28.50; rye middlings, $52; white hominy feed, nominal, all in 100-pound sacks. Cottonseed oil meal, $79; linseed oil meal, $80, in 100-pound sacks.

Hay and Straw.—Offerings are somewhat heavier at most harbor points, there is a light tendency toward accumulation and market and is rather easy in tone. Late sales of No. 1 timothy are reported at $35, and it is doubtful if that price can be exceeded now at any harbor point. The embargo on the New York Central is causing a decrease of new invoices on that road, and the Long Island Railroad is not issuing permits for Bushwick station at present. Rye straw is slow and rather easy.

Hay.—No. 1 large bales, $35 ton. No. 2 $32@34 ton; No. 3, $20@32; shipping $27@29 ton. Fancy light clover mixed, $33 ton. Clover, No. 1, mixed, $31@32.

Straw.—Per ton, No. 1 rye, $14@15; No. 1, oat, $15.

Wheat.—No. 2 red, $2.37½; No. 2 hard winter, $2.37½.

Corn.—No. 2 yellow, $1.72¼; No. 3 yellow, $1.71¾.

Oats.—No. 2 white, 81½; No. 3 white, 80½c.

Rye.—Export, $1.53.

PITTSBURGH HAY AND GRAIN

Pittsburgh, Pa., Nov. 10, 1919.

Hay.—No. 1 timothy, $28.50@29; No. 2 $26.50@27; No. 3, $24@25; No. 1 light mixed, $27@28; No. 1 clover mixed, $29@29.50. New No. 2 clover mixed, $25@26.

Straw.—Receipts of straw very light, only a few cars arrived during week. Buyers are active in securing winter supplies. Market advancing.

No. 1 oat, $12.25@12.75; No. 2, $11.75@12.25; No. 1 wheat, $12.25@12.75; No. 2, $11.75@12.25; No. 1 rye, $12.75@13.25; No. 2, $12.25@12.75.

Ear Corn.—Receipts and demand are both light, not much trading, buyers anticipating lower market. New No. 2 ear corn offered at $1.30 per bushel.

Oats.—Better feeling on oats. Receipts light, demand good. The market is advancing. No. 1 white, 78c. No. 2, 77@77¾c; No. 3, white, 75@76c.

PHILADELPHIA DAIRY MARKET

Philadelphia, Pa., Nov. 10, 1919.

Butter.—Receipts, 1,298 tubs. The Produce Exchange was closed and there was little trading on the street. The market was quotably unchanged but had a weak undertone and sales in some instances were noted at slight concessions from quotations. Following were the prices quoted: Fresh, solid-packed creamery, fancy, high-scoring goods, 71@73c, the latter for jobbing sales; extra, 70c; extra firsts, 66@67c; firsts, 57@61c; seconds, 53@56c; sweet creamery, choice and fancy, 72@74c; fair to good, 61@70c; ladle-packed, as to quality, 49@51c; packing stock, 46@48c; fancy brands of nearby prints jobbing at 70@78c; good to choice, 66@75c; fair, 60@64c.

Cheese.—Firmly held. Quotations were as follows: New York whole-milk flats, fancy, 33@33¼c; fair to good, 31½@32½c; Wisconsin, whole-milk flats, fancy, 33@33½c; fair to good, 31@32c; jobbing sales of fancy goods, 34@35c.

NEW YORK MILK MARKET

New York City, Nov. 10, 1919.

Receipts showed a slight decrease and with good demand in all parts of the city surplus has entirely disappeared. Drivers of milk wagons have demanded and received increased wages which has resulted in an advance in price of all grades to the consumers. Grade A bottled is now 20 cents per quart in this city; grade B, 18 cents; loose milk, 14@15c. The November rate to the shipper in 200-mile zone for 3 percent milk is $3.33 per 100 lbs.; or about 7.2 cents per quart; 3.06 percent milk is $3.57; 4 percent milk is $3.73, or about 8 cents per quart.

Receipts of milk and cream in 40-quart cans for the week ending November 8, 1919 were as follows:

Railroad	Milk	Cream
Erie	43,482	3,030
Susquehanna	7,524	108
West Shore	13,620	1,762
Lackawanna	56,272	1,860
N. Y. Central (long haul)	135,847	2,122
Ontario	45,715	1,410
Lehigh Valley	45,652	843
New Haven	6,024	52
Pennsylvania	11,982	406
Other Sources	5,800	200
Totals	371,918	12,202
Same week last year	350,390	10,015

TOBACCO MARKET

The leading event of the week was the sale of a large portion of the Ohio crop. The same was estimated at some 12,000 cases, the purchase being made after a most thoro investigation which led to the knowledge that the product is of excellent quality, worthy of the reputation of the firm which bought it. It is said that the same will be ready for delivery by the new year, but prices of sales were not reported. No sales were reported in Pennsylvania there being a continuation of the deadlock which has existed between buyers and sellers. The latter hold that with hail-cut tobacco selling at $10@12 per cwt. the sound grades should command considerably more. Buyers did not offer more than $15 per cwt. for wrappers and some $3 less for fillers which it will be seen would be quite unprofitable to growers. It now seems likely that much of the crop will be warehoused and held the same as that of last year. In the Wisconsin locality much of the crop has been sold at prices ranging from $11 to $35 per cwt. Hail cut brought $11 to 15 per cwt. according to the extent of damage. Binder grades sold at from $25 to $35 per cwt. the latter for fancy offerings only. Crop lots were sold at $20 and 5; $23 and 8; $25 and 10; $27 and 10; $30 and 10; $25 and 5; $25 and 4 etc. In the Connecticut valley the situation was much the same as in Pennsylvania and amounts to one of watchful waiting for something to develop. With an expensively grown crop here as elsewhere growers will not sell unless fair prices are to be obtained.

Farm Products Prices and Prospects

ENGLAND INCREASES FOOD PRODUCTION

Previous to the recent war England depended almost entirely on importation for her food. Crop production was largely academic. England believed that she could buy her food cheaper than she could grow it. Then suddenly there came the war, and with it the German submarine. In a frantic effort to counteract the submarine, every effort was bent to increase the production of crops, particularly the cereal grains.

To the casual observer it would seem impossible to affect the situation one way or the other in so short a time. Certainly the Germans felt that it could not be done, and were confident that England would soon be on her knees in starvation. But England did not starve.

Germans probably believe that the submarine blockade broke down or was less efficient than hoped for. Perhaps this is the case, but certainly Germany's failure to starve England was due in no small measure to the way the English increased home production and cut down the necessity for importation. Here are the figures.

Before the war the United Kingdom imported 78 percent of its wheat and flour, and 62 percent of its total cereals. In 1918, however, the percentage figures fell to 64 percent and 44 percent respectively, indicating a most notable increase in domestic production secured under very difficult circumstances. Furthermore, the domestic production of meat was considerably increased, with the exceptions of bacon and hams, butter and cheese. It seems that under war conditions these products, derived from animals which in the main compete with man for cereal foods, could not be produced economically.

It is interesting to note, furthermore, that in 1918 the United States supplied to the British Isles more than half of their total imports of wheat and flour, and probably a third of the total imports of meat, except bacon and hams. Of this last the United States stood far in the lead, sending to the United Kingdom practically four times as much as all other countries combined. The indications are aso that for some years to come we must continue to export food across the water.—S. I. C.

LITTLE STORIES OF THE NATION'S BUSINESS

With the close of the active building season the United States faces a housing shortage equal to the needs of 4,000,000 people.

Florida is spending more than $2,000,000 on new hotel work in preparation for the greatest tourists' year in history.

Charles M. Schwab intimates that the railroads of the country will need approximately 5,000,000 tons of steel rails during the next twelve months.

Five hundred Armenian women, employed by the American Red Cross, have built 100 miles of stone roads in Mesopotamia and reconstructed several steel bridges within the past four months to facilitate transportation of Red Cross supplies.

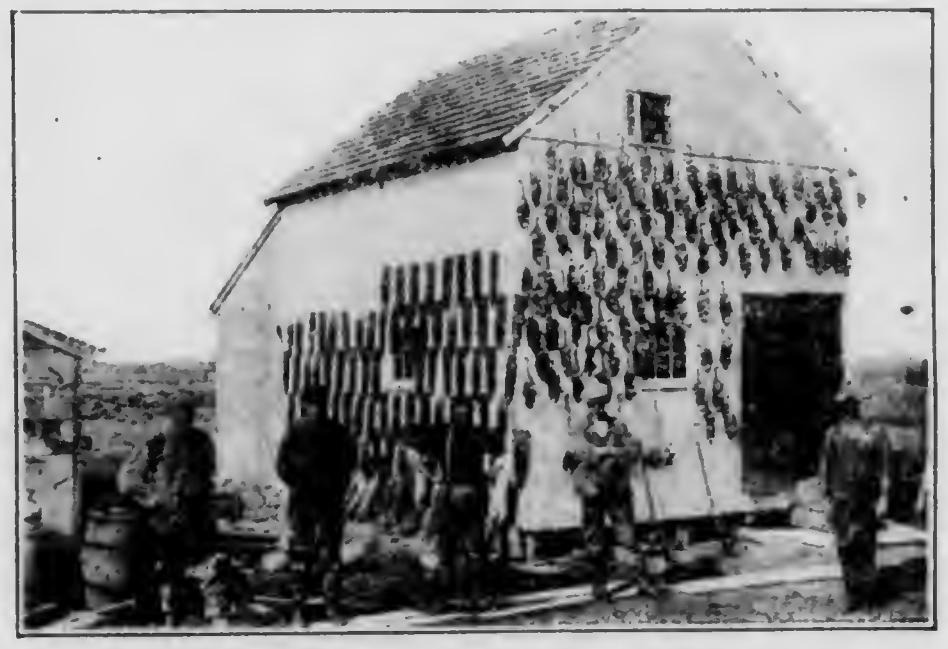
Thirty thousands trained artisans are prepared to leave Germany for Mexico.

The housing situation in Berlin has become so acute that the municipality is renting cells in the old city jail.—The Nation's Business for November.

THAT GERMAN SURPLUS

German goods have been said to be stored in large quantities for export at the first possible moment. A devastating torrent has sometimes been predicted.

England officially holds another view. The President of the Board of Trade says, "Beyond a comparatively small quantity there does not seem to be any accumulation of goods in Germany ready for export. Their costs are enormous. In addition there is a great fall in productivity. There is no great manufacturing activity in Germany. Industry is not moving but is very stagnant. They are short of raw material, and their state is pitiful with regard to coal. Great as our difficulties are here, theirs are infinitely greater."—The Nation's Business for November.



Successful Trappers and Their "Catch"

ANIMALS AND HUMAN BEINGS

Virtually all the diseases affecting human beings reach the United States. Only one-half of those affecting animals prevail among us. While few human diseases are absolutely rooted out, several animal diseases have been completely overcome in this country and others are in a fair way toward eradication.

The size and strength of men and women are about the same; but our cattle are steadily becoming larger, our horses stronger, our chickens handsomer and more productive of eggs. And the advance is not due to natural evolution but to artificial aids in nature.

BEWARE OF "LAND BOOMS"

The serious question in the farm land "boom" in the Corn Belt States and other sections is whether the prices of farm products will remain at their present levels. The Department of Agriculture is making a careful investigation of the present movement of prices with a view to determine its probable effects. As a preliminary result of its investigations the department offers the following caution to farmers:

Much of the present speculative activity has been due to the fact that speculators have been able to catch some farmers unawares, buying their farms at a much lower figure than was justified in relation to prices in adjoining regions. Therefore you should be careful about selling to a speculator who is buying to sell again. If it is worth more to him it probably may be worth more to you. If you own a farm and desire to continue farming be very sure before selling that you can obtain out of the proceeds of the sale as good a farm as you have sold.

If you desire to purchase a farm, you should be very sure that the price you pay is fully justified by the probable net earnings of the farm when conditions become more normal.

Be careful that the buyer of your farm is able to complete his payment on March first in case he fails to resell. In general it is safe to require an initial cash payment of one-third the sale price.

Be cautious about speculating yourself. Especially do not buy on a narrow cash margin with the expectation that you will be able to sell and obtain the necessary means of settling your contract. You may not be able to effect a sale. A land "boom" may collapse suddenly.

IMPORTANT TO EXPRESS SHIPPERS

Preparations are being made to put the new express packing rules into effect on December 10, the date authorized by the United States Railroad Administration, which recently approved the new requirements. This is regarded by express traffic officals as one of the most effective steps taken to safeguard merchandise in transit by express since the unification of the various lines into the American Railway Express Company, which is agent of the Government in handling the express business of the entire country.

While they will not affect the heavy movement of perishable farm products by express, as such traffic usually travels in crates and barrels, the new packing requirements will be of much interest and importance to farmers who have other commodities to send to market by express, or goods to return to city merchants. The rules will not permit the use of paper wapping for packages over 25 pounds, nor of ordinary paper boxes, wrapped or unwrapped, when the weight of the contents is over that limit. For shipments over 25 pounds, wooden containers, of fibreboard, pulpboard or corrugated strawboard containers of specified test strengths, are required.

This standardization of express rules will pace the express service on the same basis as freight, so far as the character of the cartons used is concerned. In fact, the new express rules were modelled on those of the railroads and require the same kind of containers, except that in the express service a wider latitude is permitted in the size of the carton used. The new regulations are embodied in Supplement No. 5, to Express Classifications No. 26, copies of which may be secured at any express office.

A BIG CROP OF POTATOES

Over $6,000 worth of potatoes from 15 acres. It doesn't sound possible; yet that is what actually happened this year on the Wm. H. Hart farm in Dutchess County, N. Y.

The variety of seed that produced this large crop was Spauldings Rose No. 4, from Florira. The seed was brought up north 2 years ago and planted on the Hart farm. The crop of potatoes resulting from this original planting was used as the seed for this year's crop which gave such remarkable results. Mr. Hart says this is the best thing he ever did in farming which is a sure enough recommendation for he is a veteran farmer and one of the big fruit men of Dutchess County.

Under Mr. Hart's system of handling, the potatoes are brought to the packing house in rough crates and held there for a couple of days to dry out thoroughly before they are dumped into the big storage bin which is 80 feet long and 40 feet wide. Despite the large size of the bin the crop was so large this year that it was hard to accommodate it all.

Blight caused some trouble this year on this farm as well as in the surrounding country but constant and careful spraying kept the rot in check.—H. T. B.

CARE OF SQUASH AND PUMPKINS

Few people seem to know how to keep squash and pumpkins for all winter and early summer use, but it can be done with but little trouble. Always keep them in a dry, frost-proof room. The top shelf in a pantry is generally a good place for them. Paint them over with one coat of shellac, and never let the stems get broken off as that would allow disease germs to get a foothold at once. On this account never lift them by the stem. A dark, damp place is sure to cause them to rot.—E. M. L. B.

The good dairy farmer will feed his land as well as hs cows. Home grown feeds, especially silage, help the profit side of the ledger.

Durable-DURHAM Hosiery is a product of industrial democracy—never of Child Labor. We have no strikes or lockouts.

DURABLE DURHAM HOSIERY TRADE MARK

Full of warmth and full of wear

HERE is comfort for cold weather. Durable-DURHAM fleecy-lined Hosiery is warm, and because of this it is the sensible hosiery for winter wear. Every pair has soft, thick, fleecy lining. They have the strength to give long wear—and stay good-looking through many wearings and washings.

Durable-DURHAM Hosiery includes not only Fleecy-lined but other styles for every member of the family—for work, dress, or play—for every season of the year. The children's stockings are made doubly strong to stand the hardest wear and tear. Styles for men and women include all fashionable colors and come in all weights from sheer mercerized to the heavy fleecy-lined.

Every pair is extra strongly reinforced at points of hardest wear. Legs are full length; tops wide and elastic; sizes are accurately marked. Soles and toes are smooth, seamless and even. The Durham dyes will not fade.

DURABLE
DURHAM HOSIERY
FOR MEN, WOMEN AND CHILDREN
MADE STRONGEST WHERE THE WEAR IS HARDEST

Ask for Durable-DURHAM Hosiery and look for the trade mark ticket attached to each pair. You should be able to buy it at any dealer's. If you do not find it, please write to our sales department, 88 Leonard Street, New York, giving us the name of your dealer.

Durham Hosiery Mills, Durham, N. C.
Sales Office: 88 Leonard Street, New York

WHITE LIGHT FROM KEROSENE Beats Gas or Electric

BURNS 94% AIR
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TWICE THE LIGHT ON HALF THE OIL

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Make your home bright and cheerful, saving one-half on oil. Government and leading University tests prove this wonderful new Aladdin nearly five times as efficient as best round wick open-flame lamps. Burns 50 hours on one gallon common kerosene (coal-oil). No odor, smoke or noise, no pumping up, easy to operate, won't explode. WON GOLD MEDAL. GUARANTEED. Prove for yourself, without risk, by

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that Aladdin has no equal as a white light. If not satisfied, return at our expense. $1000 given anyone showing us an oil lamp equal in every way to this NEW MODEL 8 ALADDIN.

GET YOURS FREE! We want one user in each locality to whom customers can be referred. In that way you may get your own without cost. Be the first and write us quick for 10 DAY FREE TRIAL OFFER and learn how to get one FREE.

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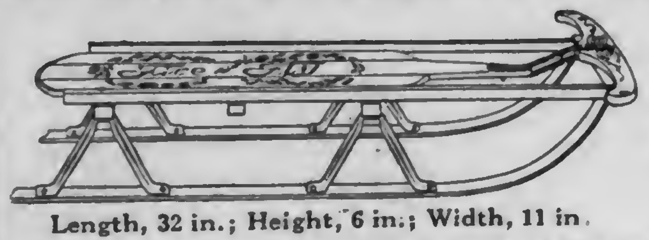
Make big money spare or full time. Our easy selling plan makes experience unnecessary. We start you without money. Sample sent for 10 days trial and GIVEN FREE when you become a distributor.

A Real "Snow Mobile"



Fire Fly Coaster

Length, 32 in.; Height, 6 in.; Width, 11 in.

Send us 4 subscriptions for the balance of this year and all of next or to Jan. 1, 1921 at 75 cents each and we will send you a Fire Fly coaster as a reward. Given with a single subscription and $1.50 additional.

The Fire Fly coasters have flexible spring steel runners. This enables one to guide the coaster by the steering bar, curving the runners to right or left as desired. No more wet feet from steering. Get busy at once and secure one of these sleds.

PENNSYLVANIA FARMER, 261 South Third Street, Phila., Pa.

MORE ANSWERS TO "BACHELOR"

(Continued from Page 20.)

There are girls, as well as boys, we well know, who will leave the farm for the city, in quest of more excitement and the brighter lights, in preferencee to the farm and will not come back however, attractive the farm may be. They have no love for the pure air and songsters of the country. But this has been and always will be so, I believe.

Too many young people, both male and female consider the farm a place of drudgery. This is not true if there is more than the accumulation of money urging you on for the farm can be made into the happiest of homes since music, books, flowers and conveniences are to be had for the farm home just as easily as for the city home and are within the reach of any young couple.

If I can trust to Fate I hope she has designed for me a place on the farm, in preference to a nursing career.

I wish we could hear from some of our other young farm friends on this subject and get their views on the matter.—A Farm Lass.

We Are Drifting, All Right

I am like some others. I always intend to live on the farm. A few of the young people out here would rather live in the city than on the farm. But that is not the way witn me. It is much pleasanter here in the summer or any other time with the birds and flowers and in the fall with the fields of ripening grain, the apples and all other fruit to take care of.

As for town life, my big brother has to go to work when the whistles blow and can not go home until after they blow at night. Here on the farm we can do as we like.

I had a little experience living in town with my brother and going to school and was glad when Friday night came so I could go home again out in the country so I could drive either the nice horses or the auto to attend Grange.

Out this way, my friends from the city enjoy coming out here in the country for two weeks or more for their vacation, so they could enjoy the strawberries and other nice fruit that are raised on the farm.

It is nearly time for the young folks in town to want to come out in the country for a nice sleigh-ride and also enjoy having a party and have warm sugar, wax or oysters. Grange orchestra furnishes music for entertainments. The majority of the girls around here would rather read story books than to do fancy work or play the piano. Feeding the chickens, loading hay and digging potatoes is nicer than being a shop girl and living in town.—A Young Maid, Bradford County, Pa.

Satisfied on the Farm

I am a reader of your paper and have read with interest, the letter written by a young man from Westmoreland County. His letter brings up the subject of why the young people leave the farm especially the girls. I think this a very interesting subject as the most of the young people have gone to the city to seek employment. Not only the girls in our county, but the young men also have left the farms. I am a farmer's daughter, was raised on a farm and am still living there but I have became somewhat discouraged with farm life, on account of the lack of conveniences that we should have around our home. My parents are getting old and seem to have lost their pride in fixing up the home and keeping it repaired as it should be to make young people feel happy on the farm. So I have become discouraged and sometimes think of going to the city and take up other employment. If I should, it would not be because I don't like the farm, I just love the farm and the horses, cows, chickens and everything that lives on the farm. I never become lonesome. I don't see how any one can get lonesome if they are interested in their work. The work on the farm is a pleasure to me, out among the chckens and cows and different other kinds of farm work. I think a country home with city conveniences would be great. The farm is the only happy place on earth to live. I think the reason so many girls go to the city is because they want to live on the streets in the height of fashion, with paint and powder on their face, and attend the movies and different other places of entertainment regularly. If they stay in the country they don't have so much time for that. It is about the same with some of our young men, they want to go to the city and work 6 or 8 hours a day and loaf on the street the rest of the day and smoke cigarettes. I don't think a country girl should marry a man raised in the city or a young man raised on the farm should marry a city girl if they want to become successful farmers, and live happy and have a happy home.—Fulton County Girl.

Hits the Bachelor

Somehow the remarks on work for farm women, on page 396, seem to have gotten on my nerves. For the sake of the girl who would otherwise be the victim I hope the bachelor with those ideas always remains single.

It seems as if a man must be along in years whose mother was a young girl in the days when women walked or rode horse back. I have heard of my grandmother (whom I can just dimly remember) riding horseback in her younger days but I very much doubt if my mother, who is nearly 74 years old, ever was on a horse in her life. We have just one neighbor who has electric lights and he is an agent for the plant. Most of us clean and fill dirty oil lamps. We use foul smelling coal oil called kerosene, too. I have a washing machine and a carpet sweeper but any one but a bachelor would know that much rubbing must still be done on a washboard like our grandmothers used and much sweeping must still be done with the antiquated broom. Also neither my machine or my sweeper will run themselves. We get water by going to the well ten rods away and pumping it or by dipping it out of the rain barrel. My little neighbor who does my washing when I don't do it hasn't even a rain barrel. By the way, she is one of those "dear beautiful girls" and a brand new baby girl was born to her the other day. When the new arrival was five days old the dear beautiful girl-mother got up and began doing the work for herself, two men, and three babies. Why? Because no one else could be found to do it. I called on this girl and while we visited she held one very tiny future farmer on her lap till the father came with the wee new farmerette who wanted "mother" and they exchanged.

BETTER LIVE STOCK EXCURSION

The Better Live Stock Excursion under the direction of the Chester County Farm Bureau, Thursday, November 6, was attended by upwards of 200 enthusiastic farmers and members of boys' clubs of Chester County. The first stop was at Highland Farms where Berkshire swine and Jersey cattle were exhibited. The farms consist of 350 acres of rolling land devoted largely to the growing of corn and alfalfa. The milk is retailed in West Chester for 14 cents per quart.

The second stop was at the Mathers farm where Southdown and Dorset sheep are being bred and fancy winter lambs produced. At this farm pure bred sheep and grades were compared and different types of animals exhibited showing the fallacy of breeding scrub animals with a view of marketing the product to the best advantage. A cross of Dorset ewes with Southdown rams is used for producing fancy winter lambs. These lambs are ready for market at an early age and possess the qualities so much in demand from the critical trade.

The third stop was at the farm of Chas. J. Garret. This farm consists of 135 acres, about 90 acres of which are kept under a six-year rotation of corn, wheat, clover and alfalfa. Three silos are used to preserve the corn crop for feeding. Mr. Garret gave a brief talk explaining the blood lines of his Holstein-Friesian cattle and had some of his best animals brought out for inspection. The study of the sires and their offspring was a valuable lesson to the visitors.

The fourth stop was at Greystone Farms where luncheon was served and an inspection made of the large herd of Jersey cattle. Dale Andrews in charge of the business end of the farm gave a brief talk concerning the individuals used in the herd and explained the methods of breeding practiced to produce high class animals of the breed. President Munn of the American Jersey Cattle Club gave a short address urging the farmers of Chester County to use better sires and raise the average production of their herds.

The final stop of the day was at Delchester Farms where Percheron horses, Ayrshire cattle and Berkshires swine were the center of interest for the visitors. The farm consists of about 1200 acres of land devoted principally to growing feed for the live stock. The manager of the farm took great pains to show the different animals and explain their lines of breeding to those present.

DELAWARE COUNTY CORN SHOW

The annual corn show of Delaware County will be held in the Media Armory, December 5 and 6. The show will be under the auspices of the Delaware County Agricultural Society. The show this year will be better than ever. This will be true because there will be a greater variety of garden and farm products placed on exhibition this year than ever.

Another feature this year will be the awarding of cash and merchandise prizes. This was the practice in former years, but during the war ribbons were awarded. While corn this year is not as good as last year, yet it will not deter farmers and corn growers from displaying their product. Grange and fruit displays will also be features.

Did you ever use a nutcracker as a wrench? Try it the next time you have a screw-top can or bottle that won't yield to other methods.

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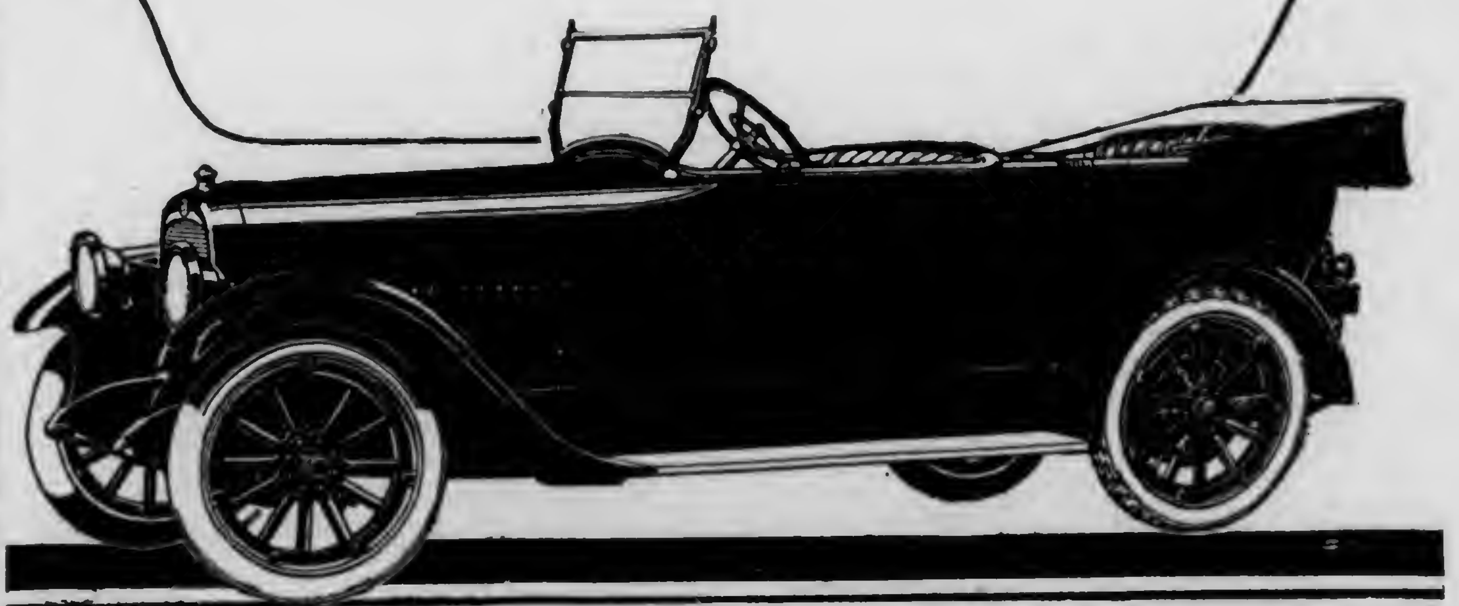

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Often in the deep snows of winter an automobile cannot get through the drifts, but the horse can travel anywhere if he can secure footing. There is just one thing will insure safe footing on any road anywhere any time, no matter how icy or slippery, and that is the

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Farm Tractors For Sale—all makes—some new, exhibited at Fairs; others little used at demonstrations—guaranteed. Lowest cash prices, or on installments. Write for tractor and engine bulletin. LOSCH FARM POWER CO., JERSEY SHORE, PA.

HAY AND POTATOES Poultry and all produce wanted at market prices. Good, steady, active demand. GIBBS & BRO., 325 N. FRONT STREET, PHILADELPHIA, PA

PENNS VALLEY STOCK FARM Percherons, Berkshires, Holsteins "Young Service Boars, pigs either sex." W. F. BISHEL, CENTRE HALL, PA.

30 WEANLING PONY COLTS. Shetland and larger sires, in spotted and solid colors. 75 older ponies, 300 to 750 lbs., broken to ride and drive. Price list for stamp. SHENANGO PONY FARMS, Espyville, Pa.

WANTED Nuts (all kinds), calves, poultry, fancy eggs and Hot House lambs. WM. H. COHEN & CO., 232 Washington Street, New York City.

Near-By Stock Farm Offers Reg. Ayrshire cattle; Reg. Berkshire pigs, all ages; White Wyandottes, all the most popular blood lines. J. A. McMAHAN, Pottsgrove, Pa.

COLLIE PUPPIES Handsome white male $20, sable and white females, $15. Pedigreed and champion stock. HUGH BRINTON, West Chester, Pa.

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WHITHER ARE WE DRIFTING?

(Continued from Page 5.)

side and that is this; no one wants to, neither will they, unless they have to, do farm work; "burn job;" "too hard work," they say.

I was discussing this labor question recently with a professional agriculturist, a county demonstrator. He wanted to know if it would not be wise for me to do less farming; that is do just what I could myself. It is absolutely out of the question for any man in this line of farming (truck farming) to earn enough, lone-handed, to make a decent living, and pay overhead charges, allow for deterioration on buildings, pay taxes and insurance. One man can not cover ground enough and do the work. Men have been making from nine to twelve dollars a day at cutting corn in this locality this fall. The same men bowl because corn meal and pig feed are $4 per 100 pounds at the feed store. What is to make it less? It should be more. When corn meal and pig feed were selling for $2 per 100 lbs., and corn cutting $2 per day; a day's work represented 100 pounds. Now-a-day's work buys more than 200 pounds. While these things are true and still growing worse, who can tell what will happen? I confess I can not answer the question. What is the cause and remedy? It is education and yet lack of education?—C. C. Hulsart.

FARM WOMEN PASS STRONG RESOLUTION

Trouble developed in the camp of the farm women at Hagerstown last Thursday during the reading of resolutions and discussion between the factions continued at a lively clip for some time, before harmony was restored. Suffrage, smoking and eating were the three big bones of contention that caused the temporary strife.

The resolution which brought about the division in the ranks, but which finally passed unanimously, follows:

WHEREAS, the Federal Suffrage Amendment has passed Congress and cannot become a law until it has been ratified by three-fourths of the states of the Union, which number is 36; and

WHEREAS, the said amendment cannot become a law in time for women to vote in the 1920 presidential elections unless special sessions of legislatures are held for purpose of ratification, and

WHEREAS, we feel it is vitally important that we shall have the opportunity to express our will by the vote in these elecetions:

THEREFORE RESOLVED, by the National Congress of Farm Women in session at Hagerstown, Md., October 30, 1919, that we urge the governors of the states which have not ratified to call immediate sessions of their legislatures for ratifications of the federal amendment; or, in case of legislatures which meet in January, prompt ratification upon assembly.

Be it further RESOLVED, that each component organization of this Congress and each individual farm woman bend every effort possible to the furtherance of this end, and thus secure real democracy in this country.

WHEREAS, the farmers of this country have been and are, by the direction of our Government, exerting to the utmost our powers in the production of food for the world, and in the conservation of all necessities; and

WHEREAS, we are being urged to grow more corn, wheat, beef and other farm products; and

WHEREAS, farm labor is scarce and almost prohibitive in cost making extremely difficult the production of sufficient of these farm crops to meet the needs of the world; and

WHEREAS, more than one and one quarter millions of good productive acres are each year devoted to the growing of tobacco at a labor cost of many times that for growing the same acreage of corn or wheat; and

WHEREAS, in addition to being wholly lacking in food qualities, tobacco is, by scientific proof and medical admission injurious to all who use it; therefore be it

RESOLVED, that we, the Farm Women's National Congress demand that Congress enact necessary laws to prohibit the raising of tobacco, at the same time providing means by which those hitherto engaged in growing this crop be furnshed the necessary aid in making the transition to other equally remunerative crops which will prevent losses to those growers which might otherwise occur by the enactment of such legislation.

REMINISCENCE OF AN OLD FRIEND

Some years ago, when I lived in Delaware, I owned an old mare mule that answered to the name of Jinny. She had a large bog spavin on her left hind leg, which looked as if it might have been placed there as a counter-weight to preserve her equilibrium when she turned a corner; but when she was hitched to a buggy and headed towards home she was the best near-horse I ever knew. She was good and true at other times, but she speeded up a little when I took the reins and said "Home, Jinny!"

Well, one day my other mule, which wasn't a mule at all, but a horse, went lame, and a kind neighbor, with the best of intentions, lent me his spare horse which was an old mare with a peevish disposition, and very pronounced ideas on the "lick her" question. She also seemed to have I. W. W. tendencies, for when Jinny, the mule, would pull, old Fan would settle back, in the harness and squeal something that sounded like "I Won't Work."

At last, after one of these performances, Jinny gave her a look in which disgust was so plainly shown that my helper, a Canadian, remarked, "Old Jinny says she is willing to pull the whole load if Fan will just keep in a good humor," and Jinny did. She did it so quickly that Fan had all she could do to get out of the way without stopping to look pleasant, but I could not see that her grouch became any less as a result. Now, I don't say that Fan was altogether to blame either, I don't believe she was born that way. Her disposition had been acquired by years of ill treatment by ignorant owners.

There are many people who act like Fan, without her excuse, for they are supposed to be reasoning beings, while she was only a horse. But, thank heaven! there are enough like Jinny to keep the old world in balance and make it a good place to live in!—Wm. A. Libby, Cambria Co., Pa.

One reason why the pressure cooker is a money saver is that by its use cheaper foods may be made appetizing.

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First Prizes and Gold Medals were awarded to Guernsey milk and Guernsey cream at the 1919 National Dairy Show. Guernsey products are consistent winners at local as well as national contests. Write for our free booklets. THE AMERICAN GUERNSEY CATTLE CLUB Box M 38 Peterboro, N. H.

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Special Sale of Ayrshires Few choice bull calves—A couple fine young cows, priced very reasonable to effect ready sale. Bull calves from fine A. R. cows, or cows now on test for Advanced Registry. Excellent opportunity to found a herd of high class Ayrshires. Your inquiries and visit to the farm will repay you. CRESTMONT FARM, SUNBURY, PA.

HOLSTEINS ⅞ Holstein heifer calves $20 to $25 each express paid in lots of 5. 20 registered heifer calves. Registered bulls all ages. 25 close springer registered cows. 50 high grade yearling heifers and bulls $55 each. High grade 2-yr.-olds and close springer cows. Come to sale Oct. 14. Close to winter and must sell. J. C. Reagan, Tully, N. Y.

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BEST in High grades and Registered Holsteins. Elegant high grade calves $25 each. With ten calves will give choice registered bull free. Will accept Liberty Bonds and W. S. S. at par. Guarantee safe arrival and gladly ship C. O. D. Write your wants. C. W. ELLIS, JR., Cortland, N. Y.

STEVENS' HOLSTEIN FARM OF CORTLAND, N. Y. King Korndyke Sadie Vale Jr., No. 20391, two nearest dams averaging 36 pounds of butter in 7 days heads my herd. Butter records from 17 pounds two-year-olds to 34 pounds at full age. Also high grade Holstein calves, either sex, $15.00 each. Write your wants. PAUL H. STEVENS, Prop.

Holstein Bulls Ready For Service Two are coming two years old, one three years. Better see these bulls; see the size and milking ability of dams and the remarkable calves the older one is getting. They have been raised under ideal conditions and are priced right. PLUMLYN FARM, Fairview Village (near Norristown), Pa.

Oakhurst Farm Ayrshires present offering—20 young cows of the choicest strains, bred to freshen this winter and spring in calf to a high-class bull. GUY D. POWER & SON, Auburn, N. Y.

Grand Individual Bull, 10 months old, weight 700 lbs., ready for service. Dam's record 26.80 lbs. butter. Sire's dam's record 33.10 lbs. at 4 years. Price 1300. The Oaks Dairy Farm, Wyalusing, Pa.

Holstein Heifer Calves By pure bred sire and high-grade big producing cows. Beautifully marked. Splendid individuals. 120 up. Browncroft Farms, McGraw, N. Y.

HIGH GRADE HOLSTEIN CALVES. Either sex. Shipped anywhere. Write for prices. Satisfaction and safe delivery guaranteed. FRANK GAMEL, PINE GROVE FARM, LOCKE, N. Y.

FOR SALE—REG. HOLSTEIN BULL CALVES, from officially-tested dams. Write for prices, pictures and pedigrees. Walter M. Cruttenden, Wilkes-Barre, Pa.

Registered Holstein and Guernsey bulls from calves to serviceable age. 250 animals in the herd. BONNYMEADS FARMS, R. D. 1, Harrisburg, Pa.

HOLSTEIN BULLS Nearly ready for service. With all papers, $75 to $100. B. Smith & Son, Granville Summit, Pa.

Ayrshire Bull Calves From high record A. R. Dams ROBERT TEMPLETON & SON, ULSTER, PA.

For Sale— Pure Bred Guernsey cows, heifers and calves (bull) RIVERVIEW FARMS, SWARTHMORE, PA.

Naturally Hornless Reg. Holstein Bull Calves $100 up; bulls fit for service $150 up. Catalog for stamp. HORNLESS HOLSTEIN FARMS, Clarks Summit, Pa.

Milking Shorthorns Bull Calves sired by Glenside Royal Stamp for sale. C. M. KENNEDY & SONS, Ulster, Bradford Co., Pa.

Registered Holstein Friesian Cattle Sons of the great Finderne Sir Valdessa, a 37 lb. bull, for sale. MILLARD E. BASEHOAR, Littlestown, Pa.

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LOOK BABY CHICKS $17 A 100 UP By Special Delivery Parcel Post, postpaid 20 different thorobred breeds. Utility & Exhibition grades. Live delivery guaranteed. Capacity 100,000 weekly. Catalog free. Nabob Hatcheries, Gambier, Ohio.

Selby Service Satisfies Ship us your produce. poultry and eggs. Penna. Potatoes a specialty. Returns day goods are sold. Ask for our market letter. SELBY PRODUCE CO., PHILADELPHIA

S. C. White Leghorn Baby Chicks for 1920 delivery. Tom Barron strain. Order early. C. P. Shirey, Stewartstown, Pa.

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Barred Plymouth Rocks (Pullet line) Buttercups and Ancona Cockerels. Also limited supply of pullets. Prices reas. J. K. Cadwallader, Wellsville, Pa. R. 1.

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Bargain in Berkshires In order to reduce our herd we are offering bred sows, boars ready for service, boar and sow pigs of all ages at prices that will effect a ready sale. If you wish to increase your herd or found a herd of Berkshires, we offer you an excellent opportunity. Your inquiries or visit will amply repay you. CRESTMONT FARM, Sunbury, Pa.

CRANDELL'S BIG TYPE O. I. C.'S The World's Grand Champion herd, winning twice as many first prizes at the National O. I. C. Show as all other breeders put together. Calloway Edd being the Grand Champion boar. Also our herd has been undefeated at all the big fairs for the past two years. Stock of all ages for sale. Get our catalog. Crandell's Prize Hogs, Cass City, Mich.

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Reg. Big Type SPOTTED POLAND-CHINA pigs, bred from a son of O. K.'s Pride No. 30. R. C. KYMER, R. 4, Shippensburg, Penn'a.

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Berkshire Pigs Very best of breeding. Eight wks. old pigs, either sex, $13 each, inc. registry. R. H. GOOD, Peach Bottom, Pa.

Large Berkshire Swine Registered High Grade. Prices reasonable. Write HOME FARM, CENTER VALLEY, PA.

Duroc-Jersey Fall Pigs at farmers' prices. Pedigreed and best of blood lines. SLATY RIDGE FARM, Box 6, Palmyra, Pa.

DUROCS and P. C. PIGS $30 Pair Pedigree. Not akin. S. O. WEEKS, DeGraff, Ohio.

Duroc Jerseys Fine thrifty pigs, 6 to 8 weeks old, $8 each. HUGH BRINTON, WEST CHESTER, PA.

Reg. Poland Chinas Choice Spring gilts and boars. Aug. and Sept. pigs shipped on approval. R. H. LYLE, Cadiz, Ohio.

Durocs, all im. Yearling and Fall yearling boar and Fall boars. Fall gilts, bred for Aug., Sept. and Oct. Spring pigs, e. sex. I. D. Jackson, R. 10, V. Wert, O.

Chester Whites Boar and Sow Pigs. Bred Sows. Collie dogs. ARCADIA FARM, BOX D, BALLY, PA.

Reg. O. I. C. and C. W. Pigs. Bred gilts and sows Satisfaction and safe delivery guaranteed. JOHN L. VAN HORN, TROY, PA.

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REGISTERED BERKSHIRE PIGS. Five litters to choose from. Six weeks old pigs $13 each. L. C. TOMKINS, Ellenton, Lyc. Co., Pa.

BERKSHIRES Superior, Epocal, Rival Champion Blood. Pigs $15 and up. O. D. BARNES, R. D. 11, Grove City, Pa.

CHESHIRES.—The high-quality home-market and home-table breed. Our type pleases. Pigs and service boars. Morningside Farm, Sylvania, Pa.

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For Sale 1 Shropshire and 1 Yearling Rambouillete ram. Also large ram lambs, both breeds, 6 growthy O. I. C. sows, April and May farrow. Stock reg. H. C. Beardsley, Montour Falls, N.Y.

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For Sale: Registered C. W. gilts and serviceable boars and pigs. Also Jersey Bulls, all ages. J. A. BOAK, NEW CASTLE, PA. R. 4

Veterinary

Conducted by W. C. Fair, V. S.

Advice thru this department is free to our subscribers. Each communication should state history and symptoms of the case in full; also the name and address of writer. Initials only will be published. We cannot make reply by mail. This is one of the most valuable columns of the paper and we invite readers to make use of it. Clippings from this column, when properly preserved and classified, make one of the most valuable medical symposiums a farmer-stockman can obtain.

Sores Behind Ears.—I have a pig 6 months old troubled with sores behind both ears. Home remedies fail to heal them. The other pigs fight this one and gnaw at the ears and sore parts. C. G., Mantua, N. J.—Apply equal parts oxide of zinc and boric acid to sores which discharge serum or pus, twice daily. To dry scabs, apply one part oxide zinc and 3 parts petrolatum twice a day. Why don't you keep this wounded pig away from the others, until the sores heal?

Cow Pox.—I have a Holstein heifer that came fresh about 5 weeks ago. She now has an infection on the lower part of udder, small yellow blisters appear, the teats are fairly free of sores. I might add the sores are rather painful, when squeezed. A. B. Everett, Pa.—Dissolve a tablespoonful hypo-sulphite of soda in one quart of water and wet sores twice daily. Her bowels should be kept open, this is easily done by a change of feed. Her stall should be kept clean. No internal treatment necessary.

Capped Hock.—One of our work horses is inclined to kick in stable the result is the point of hock is swollen, but the animal is not lame. Have applied different home remedies, none of them seem to have reduced the soft bunch enough, so that it can be noticed. What will take off such bunches? A. H. K., Richfield, O.—Chronic capped hock is usually there to stay, very little benefit is to be derived from liniment or blisters. Apply equal part tincture of iodine and spirits of camphor three times a week. A very common practice is to pinch up the skin, this is a mistake, for it will make more swelling and increase the size of bunch.

Bowed-Tendon.—I have a driving horse that has speed. He was formerly raced, but on account of his having bowed-tendon and going lame, he was retired from race track, and after recovering from his lameness he has been driven on road. His back tendons are thickened and bow out behind. Can this thickening be reduced? H. J. K., Akron, O.—Apply equal parts tincture iodine and camphorated oil to thickened tendons once a day. You will not succeed in reducing the tendons to normal size. Hand rubbing will have good effect. After a drive wet tendons with cold water, then apply cotton under bandage, leaving it on for a few hours.

Weak Pigs; Infectious Abortion.—Have 3-year sow that had litter of 9 pigs October 21st, six were dead, others have not thrived. The sow was fed corn, sour milk, middlings and potatoes. Last April this same sow had litter of 7 pigs and raised them all. I also have another sow one-year-old that farrowed litter of four pigs, 3 of them were dead at birth, the living one seems to be all right. I might say that none of these sows have been roughly handled. B. C., Newfield, N. J.—I am inclined to believe your sows suffer from infectious abortion. Clean and thoroly disinfect your hog pen and yard, using fresh made lime wash and spreading powdered lime on the floor. Coal-tar disinfectants should be used several times a week. If your sows are of good stock it will pay you to keep them, if not fatten and dispose of them to butcher.

Hogs Cough. — My hogs are troubled with a cough, not only those in pen but those which run out. Have frequently had hogs that occasionally coughed, but these seem to cough without any perceptible let up. S. M. S., Greenwood, Md. —Mix equal parts powdered gentian, ginger, powdered licorice, powdered, "but dried" sulphate of iron and salt. Give each 100 pound hog a teaspoonful in feed once daily. Your hog pen and yard should be cleaned and disinfected, and kept clean. I am inclined to believe your hogs are troubled wth bowel parasites.

HERCULES EXTRA L.F.
30% STRENGTH
HERCULES POWDER CO.

Straighten That Stream!

A brook winding through a sunny meadow may be a pretty sight—*but it is expensive to the man who owns the field.* Every rod that it winds away from a straight course costs you money—cash that you should have in your pocket, for you can easily straighten the course of a stream with the help of a little dynamite.

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ESTABLISHED 1880
PUBLISHED WEEKLY

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For These Things, Let Us Give Thanks

Some Bright Prospects For Those Who Have Faith

The following article was written by our friend, John Gould, of Ohio, some months ago. The cheerful optimism it breathes is most healthful just now. While present conditions are not as promising as Mr. Gould prophesies, yet, we believe that they are but temporary, and the good sense of the American people will come to their rescue before any catastrophe happens. Mr. Gould's long and wide experience has developed a faith in humanity that is infrequently found at present. We believe this to be a timely Thanksgiving article, because it suggests possibilities at least for which we should be thankful.—Editors.

By JOHN GOULD

OHIO

It costs nothing to prophesy, but the expense often "foots up" while waiting for fulfillment. Since the armistice, the country has been flooded with all sorts of speculation as to the future of agriculture, from direct disaster, to unmeasured prosperity; from government control and price-fixing, as well as ordered production, to the older dictum of supply and demand being the market governor; and sandwiched between the two are semi-this and semi-that by the government, to encourage and hold production from wide extremes, and in some way, keep prices somewhere near a paying basis. Each and all of these need the controlling wisdom of a Solomon without political bias.

Yet it may be possible to now discern some of the faintly indicated signs that are manifesting themselves, and some of these are traceable to the "lessons" of restraint, lately practiced in place of the matters of our fixed habits and we are finding quite as good results and an economy that we never before had dreamed of. We shall, hereafter, be more democratic. We have found out that all people are made out of about the same kind of clay and the war has brought all classes so close together, that this class and caste distinction has no real ground of defense. Helpful, constructive humanity is pretty much the same everywhere. Collectively, it has given us higher ideals than ever before. Ch[illegible]dities are now not wholly of go[illegible] wishes, but shelter, food, and raiment and in His name, liberty and protection.

Then city and town distinction has been largely wiped out. The town has found out, as never before, its dependence upon the farms. Prosperity of the town could only come about by the prosperity of the farm. We are learning that the farm with good roads, telephones, delivered mails, autos by the ten thousand and the daily co-mingling of city and town is not so dreary, and isolated as had been depicted. M[illegible] populous cities want to annex the whole county in which they were situated, so desirable are their country neighbors since, they came to know them.

A new force is to come into our s ate and National life. The four million of the very best of our young men educated as was no other army, are coming back to take up citizenship, crowded with new thoughts, and with a fresher definition of Democracy. They will want constructive betterment in government. They have learned what standing together for great principles will accomplish. It is these men from the farm, the schools, the colleges, and the towns, who are soon to be the governing, directing force of this country, and in governmental affairs, they will stand by each other for the right as they did on the death-swept fields of France and Belgium.

No! The farms are not to remain the same.

In the Spirit of Love, Thankfulness and Anticipation

An economic development is now going on, and it will not be wholly local. We are now feeding Europe with our farm surplus. The farmer of tomorrow will be allied with the farmers on the other side of the sea. It means world wide prices and as wide competition. Can the United States farmer produce as abundantly and cheaply by means of his skill and better appliances in machinery and find ready sale for his surplus?

To do so the farmer must develop a cooperative system of selling that will care for the individual with his tiny offering, and combine the products of many farms, just as the great fruit growers of the far west have their fruit associations, and the dairymen of the east and west their Leagues, and as such have become to be a collective force that commands not only attention, but respect of the great markets.

We shall have better markets organized, and regulated in which profiteering will not be the actuating force and we will have a controlled transportation service, that will prevent limiting or glutting markets. At the farmer's door, we will have a better and more flexible means of handling the farm products. The discernable new order of things is the auto truck freightage of our local produce, and it will be the market that will seek the farmer. Every mile of good road that connects some farm with the great city market will be an item in this new progress. Truck transportation is rapid, and cuts out the cost of hauling at both ends of the route. When the market comes to the farmer's door, we find it is the city price that is offered, not a local price, and this alone amounted to more than $6,000 dollars increase to the dairymen and potato growers of my immediate section last fall. The good road into the city was filled with produce-buying trucks, and every thing was in demand at morning quotations. The great onion farms here shared in the same "good luck." The Dairymen have cause to rejoice. Last October, a lone milk truck came out into our locality to buy from the farms direct, paying full price. In a week it was a 100-can load. Then a second truck, then a third, then two more and today, it is seven 100-can milk trucks in this one locality, and this is only one of several routes, all to the farmers delight. In fact, the trucks and good roads have wholly changed the farmers old standing into one, "In the Sun."

The farm tractor and the various changes that can be played upon it is to be a great factor in increasing acreage of crops. We will soon see a greater variety of farm machinery, and by its aid we may grow different crops from what we are now doing, and greatly cheapen the cost of production with a minimum of labor. I am not sure, but think that owing to the war, and its governmental lessons we will rapidly weed out our costly cows, and learn to raise and breed better ones, and of distinct breeds and stop the raising of cross-bred unknowns, and the unprofitable kinds. Cows will be bred to supply a definite demand. Adjacent to all the great cities, milk will be the first and most paying farm product and the most food of a definite quality made from the cheapest rations and sold at profitable prices, will always obtain with the farmer.

This same development will come in the care of our soils and crops for the common methods will no longer pay, figure as one may. It is knowledge and skill that will solve the difficult problems and in attaining this we will more and more acknowledge the great need of science. Agricultural supremacy may be ours, just as we now all admit that it was our men of wide education that made our efficient soldiers.

It is not the purpose of this article to take up any of the great social problems and the changes in them likely to grow out of them by reason of a war. May the readjustment be based upon a broader fraternity. We will see the Americanizing of millions because of their sons becoming Americanized on the bloodiest battlefields. We have our land filled with charitable workers playing the part of "Good Samaritans."

Many things will come in for solution, and to be fit into our National religious, moral, political, social and domestic life, and for years will need the study of the masses. The old world will not remain with us except in part, and in the renewal, each of us should be ready to take our part, and do our share, in its reconstruction. Be a live American.

Significance of Land Values

As one observes the transfers of farm property in old settled communities it raises the question as to the significance of land values. What proportion of land sales are made at representative market prices? Let us see how many sales are made. Perhaps most transfers of land in such old communities are made to local farmers who buy a piece of ground or a farm because they have a special use for it. Many want more land because they believe that they can operate more acres to better advantage. Many are looking ahead to the division of property among children. This raises two questions: How much can a farmer afford to pay for additional land under such conditions, and what significance do sale prices so made have in indicating the actual value of land in a community?

I want to give just two or three instances of what I am at. My farm might easily be worth more to me than to anybody else because of my line of work or some peculiar condition about the farm that fitted my farming notions. So then, if I wanted to buy 40 more acres located just right, I could afford to pay more than anybody else to whom the location amounted to nothing.

I have in mind a man who owns 80 acres of fine land. It is paid for. Some years ago there was a 40-acre piece next to him that could be bought for $4000. The owner did not live on it and he wanted to sell this and buy closer home. But the 80-acre man didn't want to pay that much. The next year he decided to buy it. But then the owner said that it would cost him another thousand dollars. The first man took it up at that and was glad he did. It was worth $5000 to him and more, as it just fitted in with his other land. It cost him a thousand dollars to decide, and that was expensive.

Another farm that joined our home place could be added to by the purchase of 80 acres. This was offered at $80 an acre. That was considered too high and the offer was let pass. Four years afterward the neighbor offered $100 an acre for the 80 acre barn, and couldn't get it. Later he offered $120 an acre, and still didn't get it. This man has been kicking himself ever since, and he should, too. There was the chance and he let it go by because he thought the land wasn't worth what was asked. He didn't consider then that it was worth more to him than to anybody else, but he does now since it is too late.

Now these men were not afraid of going in debt. They were all out of debt and had some money besides. They were all good farmers and their credit was of the best. It would have meant no hardship if these additions had been made, but they didn't want to pay for what they wanted. I would not say that a man ought to go in the hole when he is already in debt pretty bad, just to get more land. In fact, that is about as bad a mistake as the other. I can see the farms of some men who have done that and have always been overburdened with debt as a result. They have not progressed because the load has been too heavy.

I know another farmer who wants a strip of land next to him that is worth around $150 an acre as land, there being no buildings. To this farmer it is worth a whole lot more than that. He has ample buildings on his farm for both pieces of land. This land is priced to him at $200 an acre. It has been three years now since the opportunity came and the owner is still deciding. I'll venture that were he to decide to take it now at the $200 an acre he would be asked at least $25 an acre more, and I'll guess that by the time it is advanced to $250 an acre he will take it and think he has a bargain. And also he will kick himself because he didn't get it while it was cheaper and have had the use of it for the time he waited.

Sometimes these prices for land are too high. They are simply an investment and it costs to get what you want. Every farmer must decide what a particular price of ground is worth to him, but his price may be no indication of the value of land in general.—Earl Rogers, Ohio.

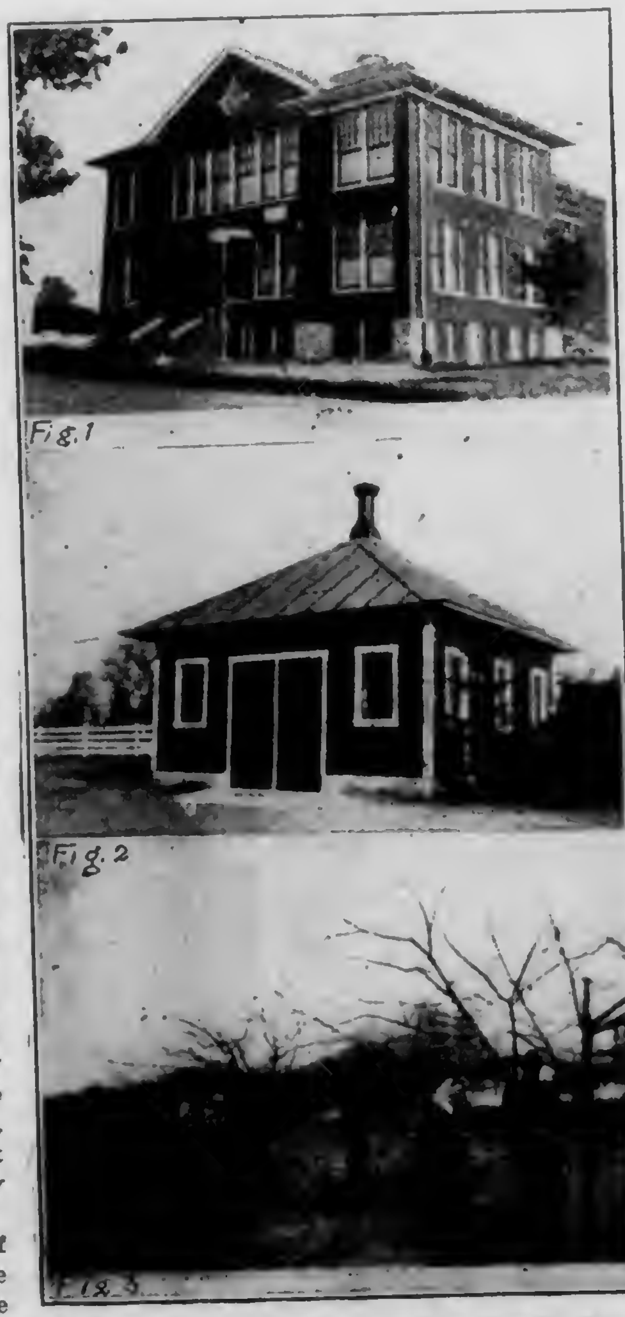

Fig. 1.—West Lampeter Vocational School Building.
Fig. 2.—Forge Shop Built by the Boys for Practice in Blacksmithing.
Fig. 3.—Practical Work in Pruning.

Government Whitewash

Whitewash that sticks! Whitewash that shines! Permanent whitewash! That is what government whitewash claims to be. That is what it is. The writer testifies from frequent and continued use, and knows that it is true. We, who have splashed the ordinary garden variety of white wash on fences, barns, buildings and ourselves, welcome this new-old, different preparation, giving it, its full and proper value. In the days of Indian warfare, Uncle Sam used this formula to make his barracks clean, wholesome and attractive for his doughboys.

The addition of coloring matter as suggested raises the question as to when white wash is not white wash. At the same time it adds variety and makes a color scheme possible. Any shade will take away from the monotony of pure white and will make the work of putting it on much more fun. The fact that it can be made up ahead adds greatly to its value and usableness. It will do all that is claimed for it. The formula is given below:

Brilliant Whitewash: Half a bushel unslaked lime; slake with warm water; cover it during the process to keep the steam; strain the liquid through a fine sieve or strainer; add a peck of salt previously well dissolved in warm water; three pounds of ground rice boiled to a thin paste and stirred in boiling hot; half pound of Spanish whiting; and a pound of glue which has previously been dissolved over a slow fire; and add five gallons of hot water to the mixture; stir well and let stand a few days. Cover up from the dirt. It should be put on hot. One pint of the mixture will cover a square yard, properly applied. Small brushes are best. There is nothing can compare with it for outside and inside work, and it retains its brilliancy for many years. Coloring matter may be put in and made of any shade.—Spanish brown, ochre or common clay, etc.—Ann Dorrance.

The Newer Type of School

The Vocational School and the Farm Boy

W. N. LOWRY, Lancaster Co., Pa.

A new type of school is springing up all over the United States. It is a farmer's school, pure and simple. Its aim is to make better farmers and better farm communities. The course is not intended to make scientific experts in agriculture. It does include a study of the reasons and principles behind the success of our best farmers. Its value lies not in superceding experience as a teacher, but in making her more efficient. The boy from the agricultural course in a Vocational School will be more apt to draw the right conclusions from his and other men's experiences. His training will help him to become as good a farmer at thirty as his father became at fifty. The four years of study is a time saver for those who would be successful farmers.

Now, how is this type of education carried on? The subjects cover farm crops, gardening, dairy and livestock management, fruit growing, farm shop work, soils and fertilizers, as well as the keeping of simple farm records. Time in the school is divided equally between the fundamental academic branches of the high school and the vocational work. The boy learns the necessary grammar, mathematics and history, too. The result is that he is not one-sided when he graduates, but is ready to be a well-balanced farmer and citizen.

The most definite and practical work is done by the supervisor of agriculture during the summer months. He visits the boys twice a month on their home farms to give them help and encouragement in their immediate problems. Each boy is required to manage a project each summer as a part of his school course. The interest taken by the agricultural teacher is a great thing for the boy as he goes about his work.

The following are some of the records from boys' projects carried on at the West Lampeter Vocational School in Lancaster Co., Pa.:—

Name	Project	Value of Products	Cost of Labor, Feed, Seed, etc.	Net Profit
Clyde Root	Cabbage & Corn	$96.05	$43.20	$52.85
Charles Zittle	Poultry	87.35	74.08	13.27
Maurice Herr	Pig Feeding	137.98	94.00	43.98
John Stauffer	Lamb Rais.	371.80	127.90	243.90
Claude Mowrer	Vegetables	27.12	9.42	17.70
Harry Houser	Sweet Potatoes			140.00
Robt. Musser	Hog Feeding	287.80	209.58	78.27
	Total Profit			$589.97

From 10 to 100 percent of the profit is given to the boy in accordance with an agreement with the father.

In these summer projects the young farmers have a chance to test what they have learned at school as well as to become more familiar with special branches of farm practice. Surely there could be no closer correlation of the principles and practice of farming.

There is one other point of significance that should be mentioned. Whether the crops or animals fail to make a profit or not is a fact that these boys know. They keep simple records of all labor and other costs entering into their projects. This means that in future years they will be able and enthusiastic business farmers. They will know their business and where it stands.

Rent Farm For One-Third

I wish to ask you to help me with a problem in renting a farm on shares. This is the situation, the owner who has all the farm implements, stock and tools is forced to stop because of sickness and wants to rent on shares and furnish all stock, tools, implements, seed and in fact everything except the help to run the farm, and deliver the milk. If I get a third of the production of the farm and cows, should I furnish ⅓ of the feed for the stock?

Should I grow corn to fill silo for the cows and hay and corn for the horses? The owner seems to think I should only get ⅓ of the sale's receipts. In Delaware they divide in the field, corn, fodder, potatoes in fact everything that can be divided in the field is kept separate from the other then each party can sell to suit himself.

Will you please tell me what is the custom in the vicinity of Philadelphia?—T. H. J., Delaware Co., Pa.

When a landlord owns all stock and implements and wishes to rent to a tenant for ⅓ of the income it usually is as follows:

Where a farm is properly stocked with a full line of implements, the tenant does all the work or labor and finds ⅓ of feed, seed and stands ⅓ of the repairs to the implements, makes all the hay, grows corn to fill the silo and furnishes ⅓ of the corn to fill it.

If the owner had a threshing machine and a silo cutter, the tenant would furnish all the labor to do this work. In case these two jobs are done by machines hired outside of the farm, then the landlord would pay ⅔ of such machine work and the tenant ⅓, as it would cost the tenant about as much for labor to do all the work with the landlord's machines as it would to pay his ⅓ to have it done. Then, too, the tenant would pay ⅓ of the fertilizer and ⅓ of the taxes.

It is a case of finding all labor, ⅓ of seed and feed by the tenant and ⅔ of these by the owner as well as all stock and implements and the farm, in addition all loss of stock (except the increase) and depreciation or wear and tear of implements, save such breaks which must be repaired to keep up the implements, when the expenses are paid ⅔ and ⅓ again.

Now, for his labor and ⅓ of all he stands as expense, the tenant would get ⅓ of hay, grain, calves, pigs, eggs, poultry, potatoes, milk, fruit or anything sold from the farm, as well as ⅓ of increase in stock. In case a land owner wants to offer a special inducement to get a tenant for the ⅓, he should furnish all seed, pay all taxes and find the grain for the horses, since there is no direct income from them, unless colts are raised, when the tenant should furnish ⅓ of the grain, and he should make the hay as part of his labor in either case.

To divide corn, fodder, hay and oats directly from the field, so that either owner or tenant could sell his share before feeding the stock would not be fair to either one interested, neither would it be for the good of the farm to have ⅓ of stover sold from the farm which could be profitably fed to stock; but any surplus hay or stover and grain not needed for feed should be sold and each one get his share as well as from the usual products sold from the farm.

There are two things to be kept in mind in renting farms:

1. The tenant should get a living wage with a chance in addition to lay up some money, and the landlord should get a fair rate of interest on the money invested in the farm and implements and an allowance for repairs.

2. The farm should be so conducted as to keep up its productiveness.—J. N. Glover, Union County, Pa.

KEEP THE DISK HARROW SHARP

The disk harrow is a tillage tool found on nearly every farm. Its useful life is about 20 years, as shown by carefully compiled statistics. Thus it is a long lived tool. There is very little about a disk to wear out. It has a few moving parts and if given good care should cause little bother. Disks should be gone over carefully every season. During the winter months the boxes should be taken apart and carefully cleaned and, if badly worn, replaced. See to it that the oiling system works and that the bearings are getting oil. Keep the arbor bolt tight. This holds the disk firmly in place. If the disk is used much it should be sharpened at least once each season. This greatly increases the penetration and decreases the draft, as it will do more work with less set. It will also do better work, and because it does not need so much angle or set there is less strain and war on the boxes. While a dull disk will cut, it is like a dull axe, inefficient and expensive to work with.

Who Makes The Money?

A Tenant Farmer's Side

For many years the farmer was called, by both the educated and ignorant classes and masses, the "Hayseeder" and the "Rube." Now we hear this: "If a farmer is not making money today, he never will." Men may be educated and intelligent, but surely of little experience who write editorials for daily newspapers, stating that "they cannot understand why the government must guarantee a price on wheat when the farmer has already had four years of unmerited prosperity."

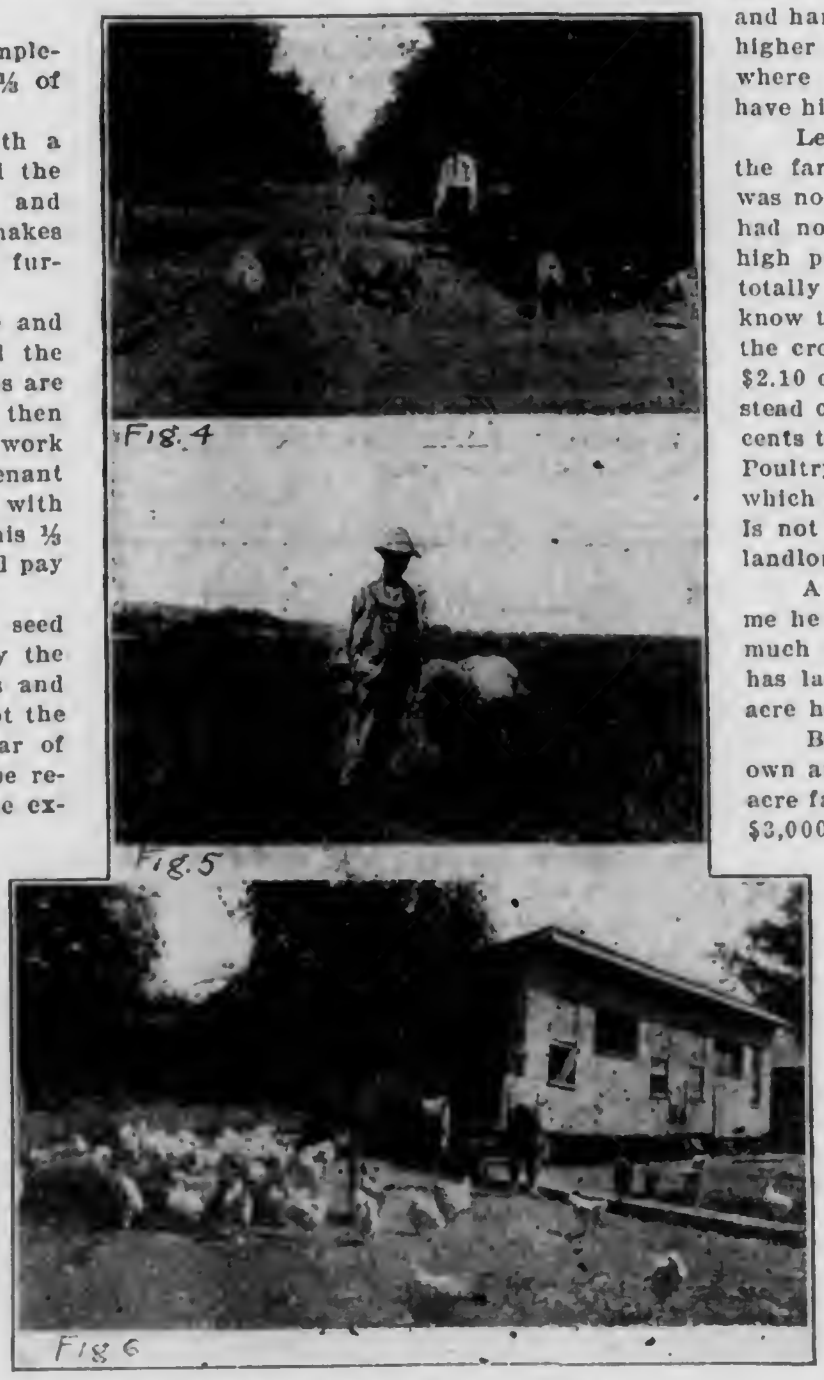

Fig. 4.—A Good Place For Good Hogs
Fig. 5.—The Largest Ram in the Township
Fig. 6.—A Profitable Farm Flock

I claim any man not on the farm making statements such as this does not know what he is talking about. Furthermore, any tenant farmer claiming that he made more money the last four years than any of the years previous to that is bluffing. He could not do it, unless for these reasons: First, selling off stock raised before 1914 which, due to rise in price thereof, made the saving worth more. In raising stock, the money expended in doing it is the same as if it were put in bank. Second, having considerable money on hand and using it to speculate. If that was his method, he is to be pitied for being a tenant farmer. Thirdly, not taking into consideration the wage due his children for labor, probably at the expense of their education.

The bane of this community is tenant farming. Somewhere I read that 80 percent of the farmers were tenants. Now then, if tenants are not specializing in any particular crop, but following the line of general farming, such as raising hay, wheat, oats and corn, what has the tenant farmer to sell? Wheat, that's all. Just wheat. In 1916 he received $1.10 per bushel. For the by-products he paid $1.20 per cwt., for bran and $1.35 for middlings. In 1917 he received $2.10 per bushel for his wheat. He paid for middlings $3.10 and for bran $3. In 1918 he received $3.20, with middlings and bran the same price as the year previous, until about July when middlings dropped to $1.90 per 100 lbs. and bran to $1.80. Four or five weeks ago the governmental restrictions were lifted, and middlings today are $3 per hundred pounds and bran $2.80.

The price of milk is higher! Yes, but these figures show that the foodstuffs used to produce it are proportionately much higher. Corn is selling at $1.75 as compared with 60 cents in 1916; oats, 80 cents compared with 42 cents in 1916. These are grains the farmer has to feed. He cannot sell them. For clothing, he pays the high prices, the same as those in the city. Machinery, smith bills and harness are anywhere from 80 to 120 percent higher than they were four years ago. Now then, where did the farmer make so much money or have his unmerited prosperity?

Let me tell you who made the money from the farms—the land owners. Their investment was no greater. Taxes were a trifle higher. They had no more work on the farm. Because of the high price of labor and material, repairs were totally abandoned unless absolutely necessary. I know the land owner. Do you? For his share of the crop, instead of $1.10 for wheat he received $2.10 or $2.20; for corn he got $1.50 or $1.75 instead of 60 to 80 cents. For oats he got from 70 cents to $1 against 40 to 55 cents before. See it? Poultry is higher. So are pork and potatoes. On which side is the percentage proportion greatest? Is not the farmer's grain worth as much as his landlord's?

A potato farmer owning his own land told me he made a good profit at $2 per bushel. How much does a tenant farmer make by the time he has laid back his own from the quarter or half acre he gets on which to plant potatoes?

But the city man says: "Why is it they all own automobiles? Simple. Listen: To run a 100-acre farm or more involves an investment of from $3,000 up. What's the interest of this money worth? The hands on the farm work early and late with no moving picture show every night, either. Invest this same money in a town or city. Let father support the family with the rest earning and saving their money. Will it be one or ten years bfore they own an automobile?

I have been on the farm since 1916. Nine years previous to that I followed another vocation not nearly so congenial as this, or I'd quit. Before that I attended school. I think your paper the best one for us of any I come across, and I have had other good ones to compare with. I hope your paper may long continue as it now is, attentive to practical conditions for Pennsylvania farmers.—John I. Anspack, Berks Co., Pa.

TO REGULATE BORAX-POTASH SALES

The Department of Agriculture has investigated the damage to crops attributed to the use of fertilizer containing high borax-potash, and has traced in important instances this potash to the product of Searles Lake. In order to permit the safe use of this product in future, the department has, under authority of the Control Act of August 1, 1917, decided to place such restrictions on the use of potash salts containing borax as will guarantee the use of an application of not more than two pounds of anhydrous borax per acre. In order to effect this measure of safety, the department has issued instructions to the producers of potash salts at Searles Lake and to all brokers, fertilizer manufacturers and mixers not to sell potash salts direct to farmers if they contain over ½ percent borax.

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PHILADELPHIA, PA., NOVEMBER 22, 1919.
VOLUME 46 NUMBER 21

Our job is to serve our readers. Whenever and wherever we can help you, write us.—The Editors.

Thankfulness And Happiness

THE old colored lady who keeps clean the offices of Pennsylvania Farmer is one of the most devoutly thankful persons we have ever met. During the years she has been here we have never heard her utter a word of complaint, nor exhibit a ruffled temper. But we have heard her utter a reverent "Thank God for that," a hundred times. It may be for a cooling breeze in summer, the brightness of the day, strength to do her work, the good health of an individual, the completion of a task—a thousand things which the ordinary person takes as a matter of course or without a thought, she appreciates and feels a glow of satisfaction not enjoyed by the thoughtless or the selfish.

We have often almost envied this old lady in her ability to enjoy every experience, even in doing the most menial task; yet, upon second thought we have realized that a thankful disposition may be acquired by anyone who is not profoundly selfish, and who remembers the true relationship that should exist between man and his Creator. There is an inclination in most of us to overlook the multitude of things we enjoy every day—or might enjoy if we would forget self long enough—and to magnify the little disappointments and annoyances. Instead of developing the ability to appreciate and enjoy, we too often find we have cultivated a pessimistic, fault-finding disposition which by its very nature precludes happiness. The truly thankful heart is happy in any condition, while the thankless cannot experience real happiness under any circumstance.

The first requisite for a thankful heart is to be conscious of the existance of a power and an intelligence superior to man, and that all that makes life and its continuation possible comes from the Supreme Being. The second essential is the ability to recognize the innumerable little things that contribute to our life and well-being, without which life would be impossible.

"It is a good thing to give thanks unto the Lord."

The Saving Sense

WHAT threatened to be the most serious strike in this time of strike hysteria subsided into an orderly process of settlement. It is a no greater triumph for the government than it is for sane and reasonable element in the miners' unions that the great coal strike was called off. This element, speaking thru their president, said: "We are American citizens. We cannot fight our government." While they submitted under protest, the fact that they respect the government and desire to be law-abiding citizens is a sufficient answer to the pessimistic extremists on the other side who say that organized labor respects no law. There are extremists and radicals in the organizations, as there are in every group of people, but we are quite as well supplied with evidence that some groups of business men are as willing to evade or over-ride the law as is any other class. It is most unfortunate that the extremists in all classes are in the lime light just now and are holding the attention of the people, but we have faith to believe that the sober, second thought of the American people will occur soon enough to avoid disaster as it did in the case of the miners.

Cost And The Selling Price

THE drop in the price of meat animals and the relatively high prices of grain and hay will probably result in a reduced meat production for the next two or three years if the disproportion continues long. It is already stated that the feeders of the middle west as well as of the east have bought more sparingly than for some years, and this in turn has a bearish effect upon the breeding end. The relative prices of feed and products have quite as much to do with production as has the law of supply and demand, and the sooner the machinery of trade provides for maintaining a stable and just relationship the sooner may we count upon a continuous and sufficient food supply.

The growing of animals is a long-time business and any condition that discourages production this year will be felt for two or three years. It is but natural for men to hesitate to use high-priced grain for the production of low-priced animals, and until there is some system adopted that will at least partially guarantee a selling price based upon cost of production the world will continue to have its alternating lean and fat years in food production. Necessity forced the adoption of this plan in the dairy industry and the public accepts the plan as just and reasonable. It would do the same with other cases once it understands the reasonableness of it. Would it be necessary to get the consent of the packers before it could be adopted?

Special Articles Wanted

We want those who have made improvements to their homes or farms to tell us abont them for the benefit of our readers. We want an article on

"What we have added to our home that has added to its beauty, comfort or convenience."

For the best and most suggestive article we will pay $10; for the second best, $7.50; and for the third best, $5.00. Also, we wish an article describing

"What farm equipment we have added that has proven satisfactory and economical."

The same prices as above will be paid for the first, second and third best articles. In both cases, all others used will be paid for at our usual rates. The articles should not exceed 1200 words in length, nor be shorter than 400 words. They should be in our hands by December 20. We reserve the right to reject any or all manuscripts. Address, Editor PENNSYLVANIA FARMER, 261 S. Third St., Phila.

Vicious Law Proposed

SENATOR Calder has introduced a bill which should meet the instant and vigorous opposition of every right thinking citizen. It provides that

> "no law of any city, state or municipality relating to the adulteration or misbranding of foods, drugs or medicines or regulating the branding thereof shall interfere with the sale of any food, drugs or medicines, in package form, which have been transported in interstate commerce."

It is disappointing to learn that a man holding the high position of United States Senator would lend himself to the furtherance of so vicious a scheme. The passage of this bill would open the way to all kinds of adulterations and misrepresentations, and break down the protection which many states have been laboring for years to establish. For instance, Pennsylvania has what is recognized as the best food and drug laws in the country. It has taken years of hard work to have some of them enacted so that the public might be protected from the unscrupulous manufacturer, but the Calder Bill would nullify all these and open the state to any kind of stuff manufactured outside if it complied with the federal food and drug laws, and these in most respects are far less exacting than the laws of Pennsylvania. The Pennsylvania law begins where the national law leaves off. The Calder bill would kill our splendid olemargarine laws as well as those controlling the sale of adulterated sausage, bleached flour, etc., and the sale of patent medicines, egg substitutes and other frauds in the food trade. A flood of resolutions and personal letters should be sent to Congressmen.

The Law of Averages

VISIT a life insurance office and apply for insurance and they will ask your age, your occupation, heredity and habits, and tell you exactly when you are going to die. Individually you may defy them. They may tell you that you should expect to die at the age of forty-one, and that you may live to the age of ninety. This is of supreme importance to the individual, but it matters little to the company. It is a matter of perfect indifference to them which of their clients dies first. They know what the grand average will be.

Now the law of averages is one of Nature's unfailing laws. It is possible to figure what the profits and losses from a certain branch of farming are likely to be for a series of years. It figures out about the same as other kinds of business. If Jones keeps so many cows and gives them good care it is easy to tell about how many cows he is going to lose during a series of ten years. Of course no one could tell whether old "Spot" is going to get well or pass into the great beyond. That has nothing to do with the law of averages. If big business concerns and life insurance companies can figure on what is going to happen on the average and the duration of life down to hours and minutes, which represents to them dollars and cents beyond which their profits are made, is it not time that farmers began devoting more time to figuring what happens on the average rather than during one or two exceptional seasons? One or two seasons' records furnish no statistics of value to guide them in their future operations.

The farm is no different from any other business institution when it comes to the orderly management of its affairs; and the general overhauling of farms going on today demands a more accurate system of figuring prospective profits and losses. If the farm fails to pay a profit, is losing in fertility and the property depreciating, it is because certain branches of the farming are not paying. It isn't producing good crops, isn't producing them economically, or is failing to market them skillfully. Viewed by the season, the farm may appear to pay, while actually it fails to accumulate a surplus of tangible assets thru a decade or more. Many times a link missing in the summary of its operations may conceal a source of loss that heavily taps the proceeds. The best test of the wisdom of farm management and the accuracy of its accounting may be found by applying the law of averages to the various branches thru a series of years.

It would give the feeder of cattle and hogs means of determining whether or not it pays him to feed out his crops on the farm; how many cattle and hogs he can safely count on finishing for market; whether it will pay to buy feeders or maintain breeding stock on the farm; and at what time of the year to sell his fat cattle and hogs.

By applying the law of averages to the different results reported by a member of agricultural colleges and experiment stations one can determine with greater accuracy whether or not these experiments would prove practical on his farm. It would sort of balance up the different factors that cause discrepencies and more nearly approximate the results that might be expected from adopting a certain system of farm management. The farmer who adapts these experiments to his business will find them of greater value in the long run if he applies the system of averages so as to overcome the conditions of weather, time of the year, surrounding conditions, the economic phases and more than a hundred other conflicting factors which are likely to cause a variation in results.

HARRISBURG LETTER

The Big Crops.—Most of the summaries of reports on the crops issued by the State Department of Agriculture tell of larger yields than expected and records broken in the cases of corn and buckwheat, while in spite of the appearance of serious diseases the potato crop has been tabulated as greater than in 1918 and the wheat threshed has run high in figures. Probably, the Keystone State has raised more of the food which it needs the last two years than ever known since the commonwealth became known as an industrial State. The very size of the crops has been the subject of some serious studies of the problems following breaking of records or exceeding expectations. If the crops are to be kept at the figures of 1919 there will have to be some new distribution of labor next year, say farmers, while price conditions will have to be made more certain. If the system being workd out by the new State Bureau of Markets bears out the hopes of the men who have been building it there will be a marked improvement in the way of distribution and the State will have advantages of a report service such as proved valuable in other states, especially in sections where industrial establishments predominate and the population is largely urban.

Health Committees.—Gradual organization of health committees composed of level headed and influential people is under way in the countis of the state as part of the plan of Col. Edward Martin, state commissioner of health, to get the health administration in each locality so established that public sentiment will be with it. Much valuable time and effort has been lost in years gone by through autocratic exercise of authority without consultation and the building up of local bodies to support the officials in their work may solve some problems in Pennsylvania. Medical inspection and better sanitation are moving forward and the establishment of simple forms of physical education is making strides.

Rural Education Bureau.—A seventh bureau is about to be added to the scheme of administration of the Department of Public Instruction. It will be devoted to rural education and the first work to be done will be a survey and then a study of the problems. The experience of New York and other States will be considered and some line of policy will be worked out. It may take many months before the results are apparent, but it is the plan to devote attention to education in the country on the same plane as "teachin' in the mill town" and in the big cities.

Heavy Fruit Drop.—The weather conditions this fall have caused one of the heaviest losses of apples and pears known in some of the southern counties in years. Even the first bearing of young trees has failed to make up for the loss in various sections and a short crop at a time when prices are good has been reported. Next year thousands of additional trees will begin bearing and orchard labor will be a problem as well as the care of the trees.

More Toll Roads Go.—The State Highway department in conjunction with several counties has taken over half a dozen additional toll roads in eastern counties. Some of the roads are close to 150 years old and others have taken toll for a century or more. They will be inspected and put into good condition at once. The purchases have been mainly in the vicinity of Philadelphia, York and Lancaster. The State is urging contractors for road building to hurry along their work and substantial progress has been made in several districts. Declarations for hard surface roads by several Granges have attracted attention and will have effect upon the programs for improvements in York, Lawrence, Indiana, Lycoming and other counties which voted in favor of bond issues for road betterments.

No Potato Quarantine.—State authorities who have been investigating the potato wart say that they do not anticipate a condition which will necessitate the establishment of quarantines beyond the districts where the pest has been located. The planting of immune varities is being urged everywhere.

Food Law Jumble.—Between pending bills in congress and some uncertainties in the food laws of this State there is a condition now in Pennsylvania which is causing irritation. From all accounts there are many foods being put on sale which are evasions of the label requirements, but owing to doubts as to how far the state can go it will be necessary to get some decisions. The substitutes for liquor, the watering of various products and the attempts to sell stale eggs as fresh are all bringing new problems.

NEW YORK LETTER

Farm and Home Bureau Notes.—One of the finest features at six county fairs this year was the day nurseries which were housed by the societies, supervised by the home bureaus and equipped by individuals and boards of health. Nurses, doctors and volunteer helpers made these features very efficient and valuable in the service rendered, while the babies themselves made them most interesting. By actual count 1020 women and children made use of the Binghamton nursery. Other counties reporting results in this work are: Tioga, Monroe, Chenango, Orleans and Stenton. In both Jefferson and Broome counties the Home Bureau and Farm Bureau members, to the number of 1810 in the former county alone, took an automobile trip to the model homes and model farmes, inspecting the equipment in each. The attorney general says farm bureau signs are legally placed within the limits of the roadside, as they are not business or commercial signs.

Better Neighbors.—A thousand women of Syracuse are asked to be good neighbors with another thousand foreign women of the city who are strangers here. Each woman will win the foreign woman's confidence, will exchange visits with her helping each in times of sickness or trouble, exchanging receipts and teaching each other customs. This is a plan that might well be tried in the country, with so many new back to the landers who need advice and help.

Protest wave policy.—The Onondaga Sheep Growers' Association has personally protested the governments' policy in admitting raw wool free of duty. They say it will cut the price of American wool one-half and that the present high prices of clothing is not due to the high cost of wool as it leaves the grower's hands; that the increase in the price of wool in the average men's suit is but $2.40 since war times. Imported wool free of duty will make the industry non-profitable, and instead of helping the consumer will rob him of one ounce of food—Profiteering and high labor wage is credited with present high cost of clothing—The association also unanimously asked that all garments be labelled, showing the amount of vergin wool each contains.

Good English Week.—The schools of the State are holding a "Good English Week" when special attention in drill and practice is being paid to the use of good english. Good resuls are expected from the movement and it may be made an annual affair.

Lime and Phosphate for Pastures.—The State college placed some tests on top dressing pastures in Tompkins county last year with such good results that now the Farm Bureau of that county is ordering a carload of lime to be distributed in two ton lots to farmers who will co-operate in conducting tests next year in their pastures using lime on some plots, acid phosphate in some and both in some.

Oswego County Progress.—The Oswego County Dairy Improvement Association shows that in ten herds there was an average gain in milk production per cow of 863 lbs. and a fat production of 28 lbs. over the previous year's record. This was accomplished with a saving of feed of $27.42 per cow. The association aims to increase production still further by introducing better bred stock and better feeding methods. Twenty thousand dollars will be realized by the county's potato growers this year because of their reputation for superior seed stock.

Woman Assemblyman.—Last year's two women assemblymen have an added woman in the person of Dr. Elizabeth Van Rensselaer Gillette, a physician who has been prominent in D. A. R. Circles.

Market Notes.—Danish Cabbage is being stored in great quantities by dealers at $25 per ton. Red cabbage has been $50 per ton. Hay is being purchased at $20 per ton—both mixed and timothy. Eggs retailed at $1 dozen on the Syracuse public market this week. Local tradesmen do not offer over 75 cents to farmers. Veal has dropped to 13c and farmers are offering to give away young calves as they cannot afford to fatten them at that price. Many are being killed as no one will fatten them. Pork is also at a low point, also beef—while dairy cows remain high—Dairymen consider the $200 to $225 dairy cow a great risk at the prices prevailing. Potatoes are $1 to $1.10 wholesale—and farmers protest them retailing at $3 to $6 per bushel as an injustice to both growers and consumer. With cabbage at $.01½ per pound the retail price is too high at 3 to 4 cents to the consumer.

NEW JERSEY NEWS

Challenge Accepted by Corn Growers.—A challenge issued by the Bucks County, (Pa.,) farmers thru the Farm Bureau has been accepted by Mercer County (N. J.,) farmers in the matter of a corn growing contest and the competition will be staged at the annual fall meeting of the Mercer County Board of Agriculture. The Trenton paper has offered a silver loving cup for the victorious team, this trophy to become the permanent property of either organization when won three times. The competition will be in ten 10-ear exhibits of White Dent corn; ten 10-ear exhibits of White Cap Yellow Dent corn, and ten 10-ear exhibits of Yellow Dent corn.

Fresh Fruits Decreasing.—Green foods and fresh fruits are becoming more scarce and the stocks are fast decreasing in this State, and supplies that are on hand are mostly poor and there is little variety. Green peppers, tomatoes and string beans are about gone, while beets are fairly good. Squash, cauliflower, turnips, onions and lettuce remain up to the standard but they are rather scarce. Potatoes are high in price and of an inferior quality with the exception of a few varieties. Lack of sugar has again caused a decrease in the sale of such fruits as require this commodity, such as cranberries, oranges, lemons and pears. The latter are poor in quality and with the others mentioned are selling at a cheaper price now because of the scarcity of sugar.

State Poultry Association.—The Mercer Poultry Association decided to support the exhibit of the New Jersey State Poultry Association, which will be held in the second Regiment Armory in this city, January 12 to 17, in connection with the annual "Agricultural Week." The organization also voted to become affiliated with the Chamber of Commerce. J. H. Wolseiffer, a well known poultry judge, attended the meeting.

COMING EVENTS

New Jersey Grange, Atlantic City, Dec. 1—3.

New Jersey Hort. Society, Atlantic City, Dec. 1—3.

Penna. State Grange, Pittsburgh, Dec. 9—12

Maryland State Grange, Chestertown, Dec. 8—11.

A. V. Poultry Association, New Kensington, Pa., Jan. 26—31.

Cornell Farmers' Week, Ithaca, N. Y., Feb. 9—13.

97¾ Bushels of Corn
WITH
E. Frank Coe's Fertilizers

Mr. Howard Speece of Dauphin County, Penna., writes

"I harvested 97¾ bushels per acre on a 10 acre field of corn planted on shale sod land. The only dressing used was E. Frank Coe's High Grade Ammoniated Superphosphate, 300 lbs. being spread broadcast and 100 lbs. drilled in with the seed. The crop grew rapidly from the start and remained dark green, going ahead of the corn which I had manured and not fertilized. Your fertilizer is the best I have ever used. You get your money's worth and it gives results."

The strength of the E. Frank Coe brands lies in the sixty years of laboratory, factory and field experience which are behind them. They help you take the "guess" out of your fertilizer problem and furnish you with the right sort of plant food in proper proportions.

Why not increase your corn profits this year? Our practical book "Corn, the Foundation of Profitable Farming" answers many troublesome questions and will help you secure

"A greater yield from every field."

Send for your copy today.

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Subsidiary of The American Agricultural Chemical Co.
51 Chambers Street, New York City
E. FRANK COE'S FERTILIZERS
Registered United States Patent Office.

WANTED—

Single men to work in large modern dairy barn. 350 head registered Holsteins. Must be good dry hand milkers. Wages $60 per month and board.

We might also use one or two experienced men to feed and milk cows on official test. Wages for this work depending upon experience and ability.

Write stating age and experience also give reference.

WINTERTHUR FARMS, Winterthur, Del.

The Extra Eggs will soon pay for one of these Automatic Self-Heating Poultry Fountains and Heaters keeps water at the right temperature day and night in the coldest weather and requires less than a quart of oil a week. Made of Galvanized Steel. A long felt want supplied. Every Hen-House needs one. Price of 1 Heater and 2 gallon Automatic Fountain complete $1.85. Also made in 3 and 4 gallon sizes. Write for Circular K and testimonials. Agents wanted.
C.A.S.FORGE WORKS, SARANAC,MICH.

How Long Would it Take on a Grindstone?

A Luther Hummer Grinder will grind a one-inch nick from an axe in 20 minutes. It will put a keen edge on an ordinary dull axe in less than five minutes.

Think what this means to you in time and labor saved. Those who have used the "Hummer" will never go back to the old-fashioned, time-wasting grindstone. The

Luther HUMMER GRINDER

sharpens mower sickles, harrow discs, plow points, ensilage knives, cultivator blades, scythes, hay-knives, and all other cutting tools twenty-five times as fast as a grindstone ***without drawing the temper from the steel.***

The secret is in the DIMO-GRIT wheels that are used *only* on Luther Tool Sharpeners. As you sit at the "Hummer" and pedal it like a bicycle, these wheels turn at a mile-a-minute clip. No pressure required—no oil or water to cool the steel.

Grind the Whole Blade at Once

The illustration at the right shows how the head of the "Hummer" swivels so that any tool can be held easily at just the right angle for grinding to the best advantage.

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2- to 8-qt. Stuffers. 4-qt. size, Japanned, $12.25
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Make Better Sausage and Finer Lard

Also save time and labor,—by using an "ENTERPRISE" Meat-and-Food Chopper and the "ENTERPRISE" Lard Press and Sausage Stuffer.

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The Enterprise Mfg. Co. of Pa.
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"ENTERPRISE"

THE WOMAN'S LAND ARMY

By E. ELLSWORTH CLASPBY.

Women as farm help have proved a success and the Woman's Land Army has come to stay in Pennsylvania. Back in the year of 1917 at Bedford, N. Y., the first experiment of the "unit plan" was conducted and some time later the Mayor's Committee of the city of New York put out ten more units. About 300 women worked in these units. During the winter of 1918 The Woman's Land Army of America took form and during the summer of 1918 twenty-one states took up the work and there was about nine hundred units and training camps with at least ten thousand women working in same.

Few of these women had any previous experience in farm work; the kind of training they received varied in the different parts of the country, in some of the eastern units no training was given, in others a few women were trained to become squad leaders, in some large units instructions were given to girls in garden work before they were sent out to work. In the middle west full training was given with the view that women be permanently employed in farm work.

A Farmerette on a Penna. Farm

The land army furnished farmers with women for every branch of farm work. The women sowed the seed, they followed the plough, did cultivating, gathered in the fruit and other harvests, they cut and helped in every branch of hay and wheat harvesting, they worked on silo work, they worked on the largest farms of the country, on dairy farms, fruit farms, private estates, did bee keeping, dairy work, truck patch work and teaming, they handled horses, tractors, reapers and all other kinds of farm machinery and in slack times they gathered in wood, sawed wood and did other work that helped in food production.

It was as a war emergency that the Woman's Land Army was started, but when peace came it was found that their help was needed more than ever in the reconstruction period when America had the duty before her of feeding a large portion of the whole world and with thousands of soldiers not getting home in time for the spring planting or in fact for much of the latter farm work of 1919 a big demand was made for women help. Now there will be a constant demand for women farm help and the women have made such good progress in farm work in Pennsylvania that the woman's land army has come to stay. The Woman's Land Army helped make food win the war, and is helping to produce food in 1919-20. The Woman's Land Army furnishes healthy outdoor labor to city women who are delighted with the work away from the hum of the factory and the crowded city streets. It's like a vacation to many of these women with pay at the same time, out in the wide open country.

Pennsylvania establishes Land Army units in Chester, Erie and Allegheny counties in 22 units made up of 1100 womn. Work began in May and the last workers were busy until November. The women workers of a community under a leader, with a system of co-operative housekeeping go out to work on neighboring farms. The members of a unit may live in a house unused and loaned for the purpose, or in a barn fitted up or in tents, cooking stoves and the other large pieces to be supplied by the farmer, the women to bring their own towels, bedding, table utensils, etc. Cooking to be done by one or more members of the unit.

Transportation can be accomplished by motor or other vehicles loaned by the farmer or neighbors.

FARMERS TO STAND ALONE

Farmers are both capitalists and laborers, consequently if they take sides with either labor or capital they are dividing their interests and will achieve little for the benefit of themselves and the cause of agriculture. This was the sentiment of the conference of the New York State Federation of Farm Bureaus at Syracuse, November 8th. The conference opposed any attempt to force the farmers of New York to line up with organized labor or to participate in discussions or conferences to settle the disputes of labor and capital. The farmers, it was predicted, instead of affiliating with labor, will become an active organized independent force thru the new American Farm Bureau Federation, to formulate an agricultural policy which will give them a much greater influence in the conduct of affairs than they could obtain thru any fusion with the labor interests.

In an address in which he strongly opposed any movement for the regulation of food prices by the state, President Silas S. Strivings of the state federation, said he feared that if agitation for lower food prices is continued, the farmer may produce less food. During the war, continued Mr. Strivings, the farmer did not receive a fair return for the food he produced, and with peace at hand he demands fair prices.—E. E. R.

DELAWARE POULTRY PRIZE CONTEST

Much interest has been aroused by the offer made by the State Board of Agriculture of prizes for the best managed flock of farm poultry. The farmers appreciate the fact that they can go on with their poultry keeping just as usual, using eggs and fowls for their table and keeping account of them and receiving the same credit for the eggs used as for eggs sold. A careful account must be kept of all operations and at the end of the period affidavits will be made as to the accuracy of the records. At the end of six months the prizes for six months records will be awarded and at the end of the year prizes for the yearly records will be awarded.

BOY CLUB LEADERS VISIT EASTERN STATES EXPOSITION

On the 28th of August we were informed by our Club Leader that three boys from Bucks County, were to be chosen to go on an educational trip to Springfield, Massachusetts, where we would stay for one week.

These three boys were to be selected from about five hundred pig club members by competition in pig judging work. The three boys who won out were: John Bryan, Eugene Rosenberger and myself.

On September the 8th, accompanied by assistant state club leader, Mr. Stewart, we left for State College. At the college we were taken out to the pig farm where we were given instructions in pig judging work. We certainly saw a fine bunch of hogs out there. While staying at the college we were also taken to the Grangers Fair at Center Hall, where we were given instructions on corn and potato judging by Mr. Schmitz from State College.

At State College we were joined by three boys from Mercer County, who were receiving instructions on dairy judging work while at the college. The three boys from Mercer County were: Thomas King, Edward Weber and Walter Knauff.

On Friday morning we left State College for Harrisburg, where we spent the night. While staying there we saw the Capitol buildings, which were very interesting to those of us who had never seen them before. We left Harrisburg for Springfield Saturday morning.

We arrived at Camp Vail, on the Eastern States Exposition grounds, on Saturday morning. About two hundred and eighty boys and girls from the ten North Atlantic States came to this camp where we spent a delightful week. We had mess the same as the soldiers did, and we also had assembly three times a day right after each meal, at which time announcements of contests, demonstrations and other things for the day were made.

At this time we had some noted speakers talk to us. On one occasion the Governor of Massachusetts spoke to us and at another time a Senator from Vermont. Mr. and Mrs. Hobbs from England told us what the boys and girls over there were starting to do in the line of club work. On another occasion a lady from Russia told us some very interesting things about the boys and girls there. Mr. and Mrs. Brooks spoke to us on the future of Camp Vail which seems very promising. After the evening assembly we gathered around the camp fire and sang a few songs which were very much enjoyed by everyone. After that we retired for the night.

By watching the different demonstrations, and looking at the exhibits one could very well see what club work has done for the boys and girls. I feel sure all the boys who made it possible for them to come to the camp enjoyed the many interesting things there. Especially do we feel thankful to those who gave the prizes for the different contests.

I hereby wish to express my thanks to our County Agent, Mr. N. E. Garber, the State Club Leader, Mr. C. G. McBride and his assistant Mr. Stewart, who certainly treated us fine on our trip and who are largely responsible for our success in judging work.—Russell S. Weiss, Bucks Co., Pa.

It begins to look as if the scenario writers will soon be forced to enter the realm of the possible. The other is just about worked out.

The Cow Feed that always makes good

You have fed some feeds that absolutely failed to produce the results you expected. You paid a good price for them and they looked good to you but they fell down on results.

The value of your cows ought to make you cut out all experimenting. You can buy a feed that makes good all the time. That feed is

HAPPY COW FEED
(24% PROTEIN)

Happy Cow Feed is composed of cotton seed meal, corn meal, cocoanut meal, wheat bran, shorts, velvet bean feed, unhulled peanut oil feed, alfalfa meal and salt.

Most of these ingredients are grown in the South. They have been the backbone of Southern dairying for years. They are now grown in such quantities that Eastern dairymen can get the benefit of them.

There are six different feeds sold under the "Happy" trade-mark. We are particularly proud of Happy Cow Feed. It never fails to win the full confidence of every dairyman who gives it a trial.

Our mill and our methods are absolutely clean. We produce nothing but feeds. We do not buy produce, or use any cheap, low-grade by-products as fillers.

You can readily understand why we are so much in favor of the new feed bill now before Congress. It is a bill to regulate and classify feeds containing low-grade by-products and refuse.

This new bill is for your protection. It is known as the "Lever Feed Bill." Write to your Congressman and ask him to support it.

Never again need you be disappointed over results in feeding your dairy cows. Feed Happy Cow Feed. Give it a trial. You will be as happy in feeding it as we are in making and selling it to you.

Buy from your feed dealer. If he cannot supply you, send us his name, and also the names of several friends who want a better feed. We will see that you are supplied.

EDGAR-MORGAN CO., Dept. 144, Memphis, Tenn.

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BIG REDUCTION in PRICES 2 H.P. $39.85 PULLS 3¼ H.P.

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Pay No More than these low prices, the lowest since before the war. These are made possible by greatly increasing production. I made a saving, reduced my prices and gave you the saving.

90 Days Trial 10 Year Guarantee. You have 90 days in which to try the Ottawa at your own work. Any engine size you need, 1½ to 22 H-P. Stationary, Portable or Saw-Rig. Built to suit you.

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Built in the largest engine factory in America selling exclusively direct to user. The highest of quality and you make a big saving. Cash or Easy Terms.

Special Offer Send me your name and address today and I will send you my best money-saving offer and the lowest prices made by any engine company. My book will convince you of the high quality—it will also be sent you—a post card brings it.

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Clean Cut Business Farmers and Stockmen wanted as general and local agents, in counties and townships where we are not now represented. Write or call at once.
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PARSONS CHEMICAL WORKS, *Leona Park Experiment Station, Grand Ledge, Michigan.*

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IN ADVANCE. Just state which shoes you want; we send them at once without one cent in advance. Examine them thoroly and if not the biggest bargain you've ever seen, send them back at our expense and you won't be out a penny. We want to show you there's no need of paying $6 to $10 when you can buy from us direct at so much less.

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Classy, fashionable. Extra quality gunmetal leather; popular Manhattan last.

Blucher style. Solid oak leather soles; reinforced shank and cap; military heel; best workmanship. Pay only $4.60 when received. Money back if not all you expect.

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100% digestible. Low cost. Can be used on roughage without grain. Write today for special price & No-risk trial offer.
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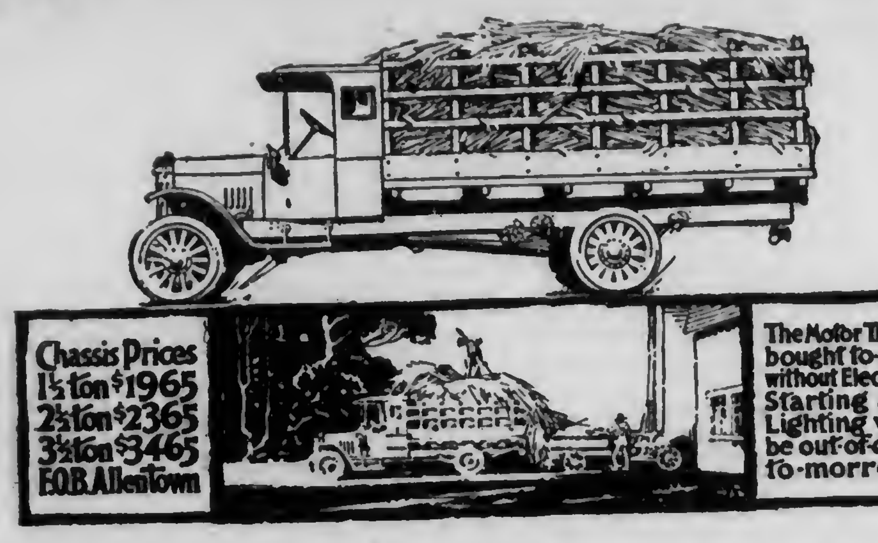
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The Motor Truck bought to-day without Electric Starting and Lighting will be out-of-date to-morrow

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Farm Loads are Bethlehem Loads. On thousands of farms the country over, Bethlehem Motor Trucks have proven themselves the vital parts of modern farm machinery.

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Range will meet all the requirements of the "Pennsylvania Farmer" satisfactorily.

We have catered to the farm trade for 25 years. Ask your dealer. Send for Booklet Free.

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is fashionable and it is *Comfortable* too—
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We want 200,000 skunk, muskrat, coon, mink, fox, and opossum skins. We make only four grades skunk, give honest assortment and a price list you can understand. We buy horse, calf and beef hides, ginseng and golden seal root. Our price lists are ready, and we need the goods. Write us today. We will buy any amount you have to offer.

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MR. RAW FUR SHIPPER—
We want your raw furs. Put your own assortment on them and mail us a copy. If we cannot net you more than you expect, we will return them to you, express paid. Our price list is yours for the asking.

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Skunk and Muskrat Wanted

21 years in the fur business. I have no rents to pay, sell direct to manufacturers and can pay you top prices for all kinds of furs. Send me a trial shipment; if I please you, tell others; if not, tell me.

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Daniel McCaffrey's Sons
623-625 Wabash Bldg., Pittsburgh, Pa.

HORTICULTURE

APPLE BANQUET A SUCCESS

The humble apple came into its own when honor was paid it by two hundred and fifty persons who attended the apple banquet at the Hamilton given by the Maryland Horticultural Society in honor of the Farmers' National Congress and the Maryland Agricultural Society.

One of the after dinner speakers was one of the greatest writers of books on apple subjects in the country, Prof. S. A. Beach, of Iowa.

Prof. Beach was preceded by Dr. Wood, president of the Maryland State College. Dr. Wood said the farmers of America stand for good sound Americanism and that behind the government of the United States are forty-five million representative farmers, who stand for American institutions and ideals.

Hon. John Barrett, director general of the Pan-American Union, who spoke at the banquet and later at Nixon's Academy, had refused an invitation to a banquet given in honor of King Albert and Queen Elizabeth to be present at the affair.

The toastmaster was A. P. Snader, president of the Horticultural Society.

Not only in the menu and in the speeches was the forbidden fruit prominent, but the decorations of the table carried out the scheme and miniature apple trees, on which were grafted real crab apples, were used as centerpieces, while sprays of apple blossoms were placed on the tables and decorated the chandeliers and walls.

The ingeniously arranged menu contained apples served in different ways in every course. The banquet was arranged under the direction of Miss Venia M. Keller, State home demonstration agent, assisted by S. B. Shaw, Miss Frick, Miss Wotring and Mrs. F. F. Harmon, who was in charge of the ladies of Trinity Church, who served as efficient and skillful waitresses. Miss Mary Bester was in charge of the decorations. J. Andrew Cohill was chairman of the committee in charge of all arrangements.

The menu was as follows: Apple cocktail, oyster en apple, baked Maryland ham, scalloped apples and sweet potatoes, spinach en suprise, green peas, apple chutsey, Maryland biscuits, apple jelly, gingerale apple salad, apples a la Creble, applebutter, cookies, sweet cider, cafe noir, cigars and cigarettes.

HANDLING RASPBERRY PLANTATIONS

The raspberry growing business has come to be neglected because of the ravages of the anthracnose. So far as I know there is no sure preventative, altho there are some things which will aid in controlling it.

Cutting out old canes immediately after picking is a big help. When old canes are frozen it is easier to get them out because one can break them off easily but as a rule it is better to get them out at once. The small signs of the anthracnose are more prominent and fully developed on old canes. Get them out and burn then and one chance for infection is removed. Long handled trimming shears and leather gloves are needed for this work.

During the summer new sprouts or shoots will come up. These bear the following year's crop and must be treated right. We nip them off with a knife or pinch them off while tender so the tops are less than 3½ feet high. By the time the bush is developed the vines are not too high for the picker to reach.

It will pay to use fertilizer on raspberries. Quick vigorous growth aids in preventing anthracnose. A strong vigorous plant will get a better start than one not having available fertility to feed on. With the exception of a small handful of complete fertilizer we never experimented with commercial fertility. However, the use of a forkful of good manure will contribute this fertility and it is far cheaper. We used this during the fall or winter. It is difficult to make soil too rich for raspberries.

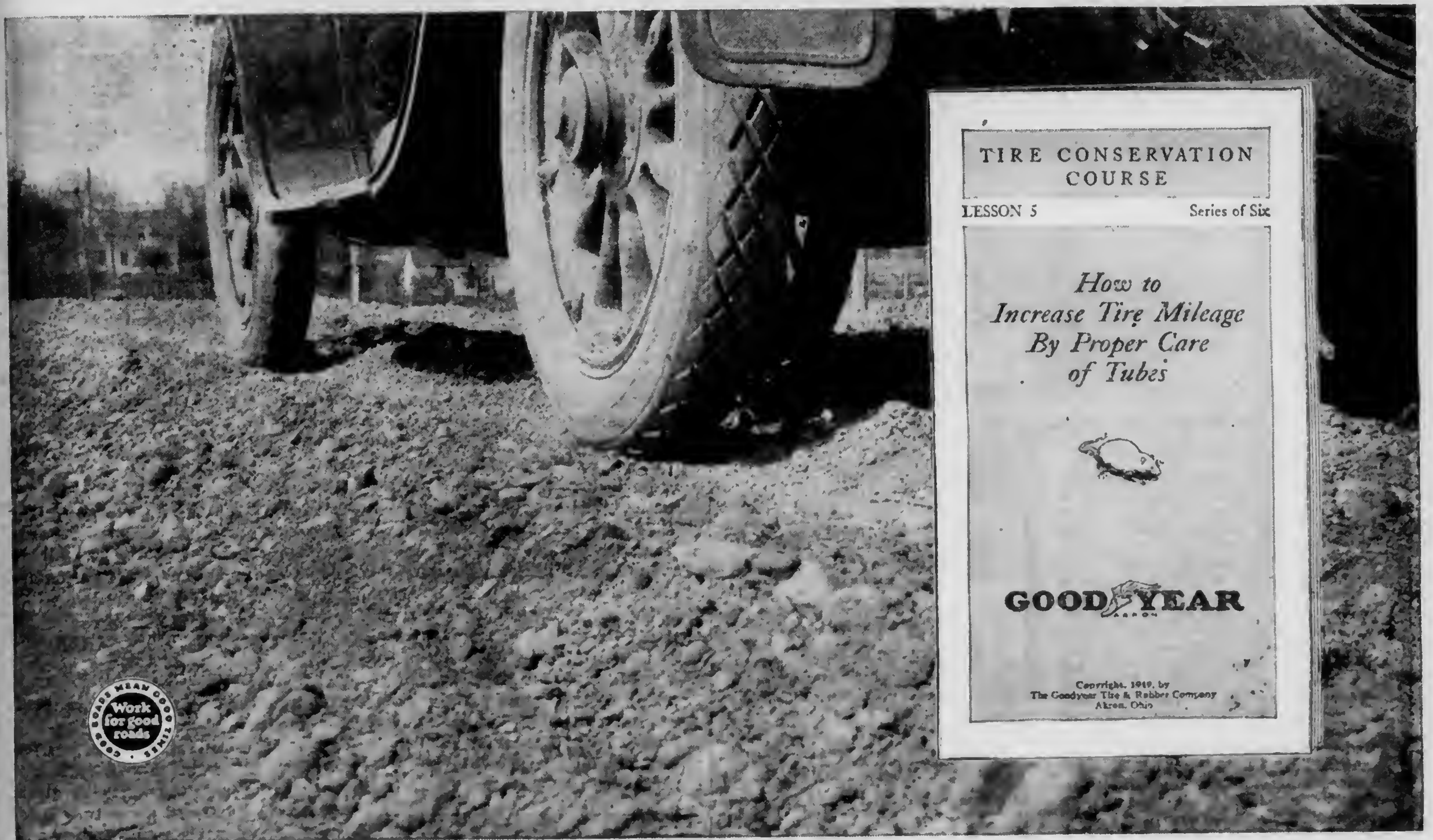
In the cultivation of the older raspberries I prefer shallow working. The older canes root closer to the surface than the first year canes do. The feeder roots are not as close but the larger ones that convey the food to the canes are near the surface. Our cultivation is with a 14 tooth drag cultivator whenever possible. A 5 or 7 tooth cultivator is used when the weeds get too large. If a patch of berries is badly affected with grass we use a one-horse plow that will turn a furrow less than 3 inches deep. One year we turn the furrow to the plants and the next turn it back to the middle of the rows.

With raspberry prices between 20 and 30 cents a quart, it is quite a saving to have your own berries. A berry plant of this kind can not be grown in a year; it takes two or three years to get a paying bush. However, many farmers have patches that have been fruiting for better than 5 years and they are doing well yet. With care—which is trimming, fertilizing and keeping them clean—I can't see why they wouldn't be profitable even longer. The advantage to leaving them longer would be to save the time it takes to start them and avoid changing places for the canes. On many farms they are in the way and when a good location is found that is out of the way it might be advisable to leave them in the same place for several years.—Earl Rogers, O.

Rhubarb may be grown in the cellar during the winter if the plants are dug late in the autumn, allowed to freeze for several weeks, placed in soil, sand or ashes, thoroly watered and kept in the dark in a warm cellar. The plants growing in the dark produce a tender stalk without much leaf surface.

"The quality of rhubarb handled in this way will often be better than that grown outside and stalks may be pulled from a box or planting of this sort for several weeks. If a continuous supply is wanted, it is well to have roots ready to bring in two or three times during the winter."

Why not make 'em take the horns off automobiles now? What few pedestrians there are left won't make much difference.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LESSON 5
Series of Six
How to Increase Tire Mileage By Proper Care of Tubes
GOODYEAR AKRON
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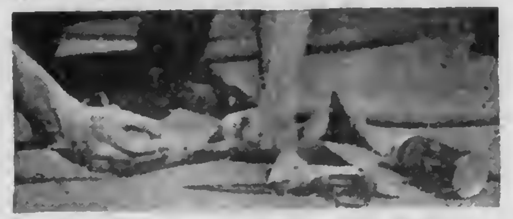
A Few Hundred Yards May Cost 10,000 Miles

A MAN with a new car had one of his tires blow out. He didn't have a spare, so he decided to run a few hundred yards to a friend's house. When he got there he discovered that neither the tire nor the tube was worth repairing, for running on the rim had fractured the casing fabric. And the tube was riddled with holes caused by being pinched against the rim. Those few hundred yards of running on the rim probably cost him 10,000 miles—miles that could have been saved by properly caring for the tube. Proper care of tubes saves miles in many other ways—not only in emergencies, but all the time. Ask your Goodyear Service Station, or write to Akron, for Lesson 5 of the Goodyear Conservation Course—telling how to increase tire mileages by proper care of tubes.



Repairing a tube with the Goodyear Tube Repair Kit

PROPER care of tubes increases by thousands of miles the life of even the best of tires. For whenever a tube fails, the casing is seriously damaged by being run flat.

Only a few hundred yards of such running may utterly spoil the tire; and even if the tube merely has a slow leak the tire will suffer the inevitable injuries due to under-inflation.

Take care of your tubes, if you wish to get the most from your tires.

Tubes inserted in the casing without being properly talced, either stick to the casing and tear because of the lack of French Talc or—when too much of this lubricant is used—they are injured because the talc collects in puddles and hardens.

Tubes must be properly inserted in the casing; otherwise they will be pinched against the rim, or—if the valve stem is at an angle—they may be torn.

Lesson 5 of the Goodyear Conservation Course gives simple but detailed directions for making your tubes serve your tires.

It also tells how tubes can be repaired permanently and in a few minutes with the Goodyear Tube Repair Kit.

Ask your Goodyear Service Station to show you one—and ask also for the other lessons of the Goodyear Conservation Course.

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The tube repaired and ready for talcing

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Her Health Was Not Left to Chance

The cows that make the big milk records are well fed and well bred, to be sure. But, above all, they are in the pink of condition. The constant strain of heavy milk production will wear down the vitality of the digestive and genital organs in the best of cows, and the result is such ailments as Abortion, Retained Afterbirth, Barrenness, Scouring, Bunches and Milk Fever. Any of these diseases can be successfully treated and eliminated with KOW-KURE, the great cow medicine. The medicinal properties of this famous remedy act directly on the organs of production and reproduction, putting the cow's system back to normal, healthy action. Feed dealers and druggists sell KOW-KURE; 60c and $1.20 packages. Consider cow-health first, and your dairy will be a leader, and a money-maker. Our free treatise, "THE HOME COW DOCTOR," will give you valuable pointers on how to treat and prevent cow diseases. Ask for your copy.

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Health Pays!

This perfect three-year-old Jersey has a yearly milk record of 17,793 lbs. Nothing short of 100% health would make such a record possible.

Try raising the health standard of your cows; it will increase your milk profits.

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Dehorn your cattle in the modern humane way. No crushing—a single stroke does the work quickly when you use a

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dirt and filth stick to the flanks and udder and fall into the milk pail. Clip the parts every three or four weeks, wipe off in a jiffy before milking and get pure, wholesome milk. A Stewart No. 1 Ball Bearing Machine will clip the parts in 5 minutes. Also good for clipping horses and mules. Lasts a lifetime. Price $12.15. Get one from your dealer's or send $2 and pay balance on arrival.

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Horse or Cow hide, Calf or other skins with hair or fur on, and make them into coats (for men and women), robes, rugs or gloves when so ordered. **Your fur goods will cost you less** than to buy them and be worth more.

Our illustrated catalog gives a lot of information. It tells how to take off and care for hides; how and when we pay the freight both ways; about **our safe dyeing process** on cow and horse hide, calf and other skins; about the fur goods and game trophies we sell, taxidermy, etc.

Then we have recently got out another we call **our Fashion book**, wholly devoted to fashion plates of muffs, neckwear and other fine fur garments, with prices; also **fur garments remodeled and repaired.**

You can have either book by sending your correct address naming which, or both books if you need both. Address

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Our competitors say we bid too high—but that's the way we get the most shipments—when the demand is heaviest. We turn our money over several times while our competitors are doing it once. *That's* why we can and do pay the highest prices. *That's* why we are so generous with our grading. *That's* why we charge no commissions. *That's* why we pay spot cash the day the goods arrive—and *that's* why our business is growing by leaps and bounds. If *you* want this kind of a square deal send for our price list at once-today—it's FREE

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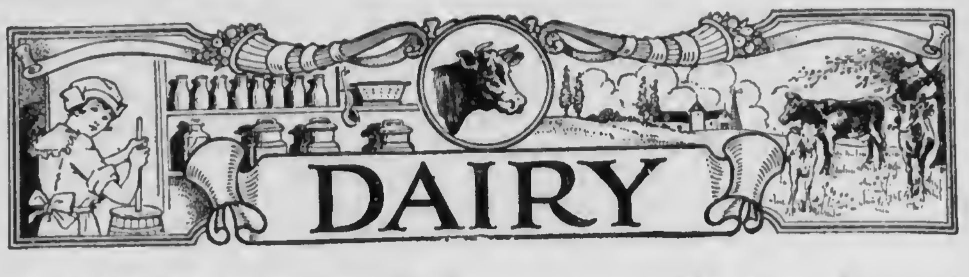

DAIRY

STATE FARM PRODUCTS SHOW

An extensive campaign to promote the dairy industry and to teach the people of Pennsylvania the food value of dairy products will be one of the features of the State Farm Products Show which will be held at Harrisburg, January 20 to 25

Secretary of Agriculture Frederik Rasmussen is one of the foremost dairy experts in the country and for the fifth season of the big State show dairying problems and exhibits promise to play a prominent part. If suitable quarters can be secured a feature will be an immense display of registered dairy cattle. Among the displays for which prizes will be offered will be exhibits of commercial cheeses, of which "cottage" cheese will form an important feature. An American Swiss cheese is now being made in Bradford, Tioga, Potter, Susquehanna and other dairying counties in the north end of the state from both skim and whole milk and efforts to educate the public to its use will be made. The Inter-State Milk Producers' Association will also have a buttermilk display and its is likely premiums will be awarded for buttermilk competition. The Dairymen's Co-Operative Sales Company, of Western Pennsylvania will also assist in the dairying end of the big show.

A Leading Pennsylvania Guernsey

No action has been taken relative to a poultry show, but Secretary Rasmussen is anxious to add it as a feature for the big yearly gathering of farmers and the prize farm products of the state. An additional class has been added for the corn exhibit to consist of thirty ears in any variety of corn. This exhibit is expected to prove educational in showing the right selection of seed corn.

Premiums amounting to over $1500 were decided upon at a meeting of the show committee this week. The More Sheep-More Wool Association will give a silver cup for the best fleece of wool exhibited, the cup to be won two consecutive years before becoming the permanent property of anyone. New features for which prizes will be offered will consist of cakes made with honey as a substitute for sugar and of a vinegar which is a by-product of honey.

SWEET CORN FODDER

"At the prices of hay and grains, what is the feeding value of cured sweet corn stalks per bundle, of the ordinary size?"—Subscriber.

Sweet corn fodder, ears removed, contains 1.3 percent ash; 1.6 percent crude protein; 5.6 percent fiber; 12.6 percent nitrogen free extract and 4.4 percent fat. Good clover and timothy mixed hay contains 6.4 percent ash; 9.9 percent crude protein; 28.5 percent fiber; 42.3 percent nitrogen free extract and 2.8 percent fat. Owing to the fact that sweet corn fodder contains so much more water than the mixed hay the percentage of food nutrients is correspondingly lower. At present prices of hay and other feeds I would estimate the feeding value of sweet corn stalks for dairy cattle to be about $9 per ton at the farm. This estimate is based upon my experience in feeding these two materials as well as the actual composition of the materials in question.—W. M. K.

DAIRY HEIFERS NEED ATTENTION

Heifers that are to freshen in a few months, if not already in the best of condition, will amply pay for extra attention in the fall. If any are poor in flesh they may be given two pounds daily of a mixture composed of two parts each of corn and oats and one part of oil meal, or a similar combination. Good legume hay will work wonders in promoting thrift, continued growth and in producing proper physical conditions for calving.

They should have continued access to pasture; but the pasture and available green feed, if not already short, may be nearly worthless after a few hard frosts. If shortage of feed is added to exposure from cold and wet, development will cease, says the State College of Agriculture at Ithaca.

As an insurance against having their growth checked, the young stock should be encouraged to come to the barn at night for a little grain and a feeding of good clover hay. If this is not feasible, a good shed where they may get these comforts should be provided.

Unthrifty calves and heifers that have developed long rough coats are likely to be found lousy when taken up in the fall. Before such stock will thrive, the lice must be destroyed. The long hair must first be clipped and a louse spray mixture applied according to directions.

CONDITIONING FOR TEST

The cow must be in proper condition to go through the work of making a good production record, whether for seven days, thirty days, ninety days or one year. Few breeders of dairy cattle realize what condition means in making a great production record. It is often the extra few pounds of flesh and reserve energy that means the breaking of a world's record for milk and butter-fat production and places some breeder on the highest pinnacle of fame. It is difficult to define exactly just how to put on this extra flesh and bring the cow safely thru her calving period, but it is seen only when cows begin their official tests as vigorous and well fleshed as skillful feeding can make them. Condition, as meaning capable of maximum production, is necessary before a phenomenal record may be looked forward to in the coming test.

© By The American Agricultural Chemical Company

A good start is half the battle, in growing corn. The corn at the left was grown on fertilizer applied as directed by our Agricultural Service Bureau, and yielded three times as much grain and nearly twice as much stover per acre as the strip of corn at the right, which for purposes of comparison, was not fertilized. No manure was used.

**Don't Work for Your Farm—
Make Your Farm Work for You**

Real mastery of the soil cuts out much of the labor and worry of farming. What would it be worth to you now—*today,* for example,—when prices of farm products are at high level, to know just what course to follow with some unproductive meadow or field where all your efforts have failed to bring the results desired. The proper selection and use of fertilizer are important; so is the selection of seed, but the ***proper management of the soil*** is important as well.

Why not find out just what to do? Why not consult our

AGRICULTURAL SERVICE BUREAU

THIS Bureau has carried on field tests for many years with many kinds of fertilizers and fertilizer materials, lime and other soil amendments in many states on different soils, under different conditions of rainfall, climate, etc. It has demonstrated to many farmers the best fertilizers for their purpose and the best ways of using them as well as the best methods of managing the soil. Each farmer has his own soil problems. Perhaps our Bureau may help you solve yours. It is under the personal charge of Dr. H. J. Wheeler, formerly Director of the Rhode Island Agricultural Experiment Station.

This service is free to you.

"How to Make Money with Fertilizers" is the title of a 56 page book (46 illustrations) containing information every farmer needs in relation to the proper use of fertilizers; it shows where profit is to be found, and how to get it. It is different from other fertilizer books and is not a catalogue. Any one of our offices named below will send it to you free. Simply mention this paper and ask for the book. Do it now. Don't work for your farm. Make your farm work for you.

If we have no agent in your town, we want one. Write us for nearest agent's name or ask for an agency yourself.

Many of our brands have been on the market for forty to sixty years.

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To obtain the exclusive services of an expert is impossible for each individual farmer; local supplies of necessary feed ingredients are uncertain; hand mixing is imperfect; and the labor cost is excessive.

With **TI-O-GA Feed Service** the selection and proportioning of ingredients to maintain the required standards of nutrition, palatability and mechanical condition are under the personal supervision of the best feed expert obtainable.

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The feeder secures the direct benefit of expert service in the use of **TI-O-GA Feeds.**

Red Brand TI-O-GA Dairy Feed to be fed with ensilage, pasturage, green fodder or low protein roughage.

White Brand TI-O-GA Dairy Feed to be fed with medium protein dry roughage.

Blue Brand TI-O-GA Dairy Feed to be fed with high protein dry roughage.

Full feeding instructions and classification of roughages will be found with every bag of **TI-O-GA Feed.** Every bag is guaranteed satisfactory when fed as intended.

Inquire of your dealer. Book on **TI-O-GA Feed Service** containing valuable information on feeding and conservation of home-grown feeds sent free on request.

The same careful service is furnished in the preparation of:
TI-O-GA Brood Sow and Pig Feed.
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Colonel's Ration (Full feed for Horses).

Tioga Mill & Elevator Co.
Waverly, N. Y.

TI-O-GA
FEED SERVICE

FALL CARE OF HEIFERS

With the coming of cold nights and cold rains a word of caution concerning the care of dairy heifers is not at this time out of place. Having been produced to take their places as soon as they are efficient dairy cows, much depends upon keeping them thrifty.

At the same time they do not need coddling or pampering. They should have continued access to pasture; but the pasture and available green feed, if not already short, may be nearly worthless after a few hard frosts. If shortage of feed is added to exposure from cold and wet development will cease.

As an insurance against having their growth checked, encourage the young stock to come to the barn at night for a little grain and a feeding of good clover hay. If this is not feasible provide a good shed where they may get these comforts.

Care is Well Repaid

Heifers that are to freshen in a few months, if not already in the best condition, will amply pay for this extra attention. If any are poor in flesh give them two pounds each day of a mixture composed of two parts each of corn and oats and one part of oil meal or a similar combination. Good legume hay will work wonders in promoting thrift and continued growth and in producing proper physical conditions for calving.

Unthrifty calves and heifers that have developed long rough coats are likely to be found lousy when taken up in the fall. Doubtless the condition of the animal has some relation to its attraction as a home for lice. Before such stock will thrive, the lice must be destroyed. First clip the long hair and then apply louse spray mixture according to directions. Select a warm day, wash the animal with a sponge and then blanket it if there is risk of exposure. This examination and treatment of the heifers may prevent the spread of the annoyance to the whole herd.

GOOD AYERSHIRES

Two very creditable Advanced Registry records have just been completed by Penshurst Farm, Montgomery County, Pa. One by McAlister's Betty 36654 whose record is 15811 pounds milk, 627.76 pounds fat, the other by Torrs Tropichon 36921, record 15037 pounds milk, 621,72 pounds fat.

Torrs Tropichon was bred by Wm. Lindsay, Torrs, Castle Douglas, Scotland, and was imported and is presently owned by Penshurst Farm. She now has four A. R. records to her credit averaging 13129 pounds milk, 627.40 pounds fat.

HIGH CLASS SIRE FOR ALLEGHENY COUNTY

Allegheny County has the distinction of having the highest priced community bull in Pennsylvania. There are 55 bulls at the head of bull associations in the state, six of which are located in the Pittsburgh district.

The bull referred to sold at the National Dairy Show at Chicago for $3600 as a calf of five months of age. He was consigned to the sale by John A. Bell, Jr., of Allegheny County, and was brought back to the County by the action of N. S. Grubbs of the Farm Bureau for six farmers in Forward Township.

The sire of the calf is King Valdessa Pontiac, whose dam is the first 40 pound cow, Mabel Segis Korndyke and a wonderful producer as well as a beautifully shaped individual.

The dam of the calf is Pabst Cynthia, a 38-lb. four-year-old daughter of King Pontiac Champion. She is a real cow of pronounced individuality and breeding. It is not likely there is another bull in any county of the Pennsylvania Association that has the backing given this individual. The bull is in the hands of A. P. Warren of Elizabeth, who is distinguished for his success in handling Pure Bred Holsteins.

PUBLICITY

The Inter-State Milk Producers' Association has established a department of Publicity and Education. It is co-operating with all agencies which are interested in the milk problem. Philadelphia dealers bear part of the expense of such publicity and the milk interests of Pittsburgh are running a parallel campaign. State Boards of Health, anti-tuberculosis societies, children's bureaus, women's clubs and boards of trade thruout the Philadelphia milk shed are all glad to have written matter for distribution dealing with the food value of milk and the care of milk. Lantern lectures and "movies" are wanted by public and other schools. The door is always open when you have a real message that fills a real need. The comparatively low retail price in Philadelphia is of course a powerful factor in stimulating milk consumption in that city.

Miss Elinor S. Brinton, formerly in the Pennsylvania Food Administration, is in charge. Raised on a Chester County farm, she can bring the farmers viewpoint to the consumer and her experience in publicity work fits her admirably for the position.—R. W. B.

CAREFUL PLANNING CUTS FEED PRICES

Buying Early and in Carload Purchases Will Help

Getting the better of high prices is not alone a matter of buying early nor even of buying in carload lots, but of buying feeds that will make the most economical ration, estimating accurately the amount of feed necessary, and utilizing home-grown crops to add variety and supplement the purchased feeds. This year the roughage part of the supply is well provided, but the small grain crop is light thruout the country and the influence on feed prices is felt.

These points are worth remembering in the campaign for lower feed costs:

Corn and barley may be used interchangeaby, depending on the price. Oats and wheat bran may be interchanged, remembering that bran is richer in protein. Amounts of linseed meal and gluten feed may be reduced in rations in which clovor or alfalfa hay are used to replace mixed hay and silage. It pays well to feed silage. It is well to utilize straw and cornstalks. It is important to inventory the feed supply, to obtain prices on feeds from dealers, to estimate the amount of feed necessary, to cooperate when buying, and to use roughages.

Nowadays it seems to be practically impossible for young people to dance enthusiastically unless they are spurred on by an orchestra equipped with a couple cow bells, a six-shooter, three or four dish pans, 15 or 20 feet of log chain, an untuned xylophone, and an aversion to music.

True Value
DAIRY FEED

Feed the Dairy Cow for Profits

THE profitable dairy cow must be bred and selected for *production.* It must be well cared for. It must be given the exact ration needed to produce the greatest possible milk yields, for the longest period, and at the *lowest net cost.*

Even the best cow cannot reach her maximum production or profit on home-grown rations. It must be supported by a ration correctly balanced for milk production.

True Value
DAIRY FEED

gives the cow the support she needs. It is built up from pure products which experience has shown to be essential for *both milk production and bodily maintenance.*

This is the truly balanced ration. It is made from correct proportions of cotton seed meal, linseed meal, corn gluten feed, ground oats, wheat bran, cocoanut meal and malt sprouts.

But the naming of ingredients does not tell the whole story of a ration. Laboratory tests must determine the true *producing elements* of each ingredient and the real worth of every True Value balanced ration.

TRUE VALUE DAIRY FEED has an available protein content of 24%, fat 5%, fibre 10%, carbohydrates 52%. These ingredients are ready for the cows' immediate assimilation in order to give her the strongest support for *best performance at the milk pail.*

TRUE VALUE DAIRY FEED is all real nutritious feed. There is no waste. It produces the most milk at the lowest possible cost.

If your dealer hasn't TRUE VALUE FEEDS write us for full information about how to get them at once.

STRATTON-LADISH MILLING CO., Dept. D, Milwaukee, Wisconsin

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True Value
PRODUCTS
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STOCK FEED
HORSE FEED
HOG FEED
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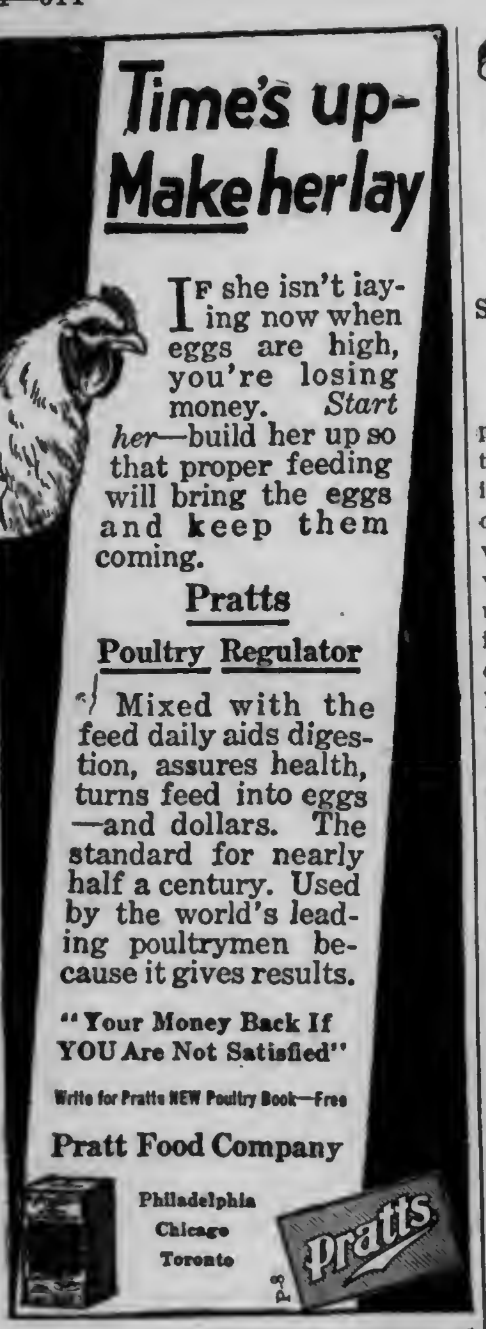
Time's up-Make her lay

If she isn't laying now when eggs are high, you're losing money. *Start her*—build her up so that proper feeding will bring the eggs and keep them coming.

Pratts Poultry Regulator

Mixed with the feed daily aids digestion, assures health, turns feed into eggs—and dollars. The standard for nearly half a century. Used by the world's leading poultrymen because it gives results.

"Your Money Back If YOU Are Not Satisfied"

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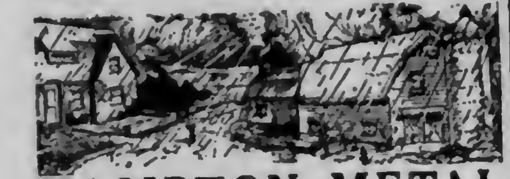
HAMPTON METAL

Hampton Metal is the only metal building material that has no come-back. Fire-proof as steel—but rust-resisting and corrosion resisting. And, "needs no paint." No steel or galvanized iron sheathing made, can stand the tests given Hampton Metal. As roofing, siding or sheathing, it has no equal. The most economical because long lived.

HAMPTON SHEATHING STYLES: Clap-board, Plain Brick Siding, Rock-face Stone, Rock-face Brick, Three-inch Beaded, Corrugated, 1¼ in. and 2½ in.

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GERMOZONE The Best Pet Stock Remedy

For Poultry, Pigeons, Dogs, Cats, Rabbits, Parrots, Canary and other birds or pet animals. Germozone is a universal and safe remedy; for colds, snuffles, roup, sore throat, loss of voice or singing, influenza, bowel trouble, distemper, sore eyes or ears, canker, gleet, loss of fur or feathers, sores, wounds, skin disease,—or other affections of skin or mucous membrane.

"My hens have never done so well as this year and haven't lost a single chick"—Mrs. Flora Kapple, Walker, Ia. "Simply grand for rabbits"—L. W. Browning, Boone, Ia. "Cannot praise Germozone enough. I use it for chickens, stock and household" —Mrs. Wm. Hoeppel, Hugo, Okla. "My bird puppies don't know what distemper is and I never had such good success before with chicks"—Curly Smith, Kennett, Mo.

Germozone is sold by most drug, seed and poultry supply dealers, or mailed postpaid in 25c, 75c and $1.50 packages from Omaha. Book on treatment of diseases free with each package.

GEO. H. LEE CO. Dept. 429 OMAHA, NEB.

LOOK BABY CHICKS $17 A 100 UP

By Special Delivery Parcel Post, postpaid 20 different thorobred breeds. Utility & Exhibition grades. Live delivery guaranteed. Capacity 100,000 weekly. Catalog free. Nabob Hatcheries, Gambier, Ohio.

Selby Service Satisfies Ship us your produce, poultry and eggs. Penna. Potatoes a specialty. Returns day goods are sold. Ask for our market letter. SELBY PRODUCE CO., PHILADELPHIA

S. C. White Leghorn Baby Chicks for 1920 delivery. Tom Barron strain. Order early. C. P. Shirey, Stewartstown, Pa.

Barred Rock COCKERELS good strains, $3.00 to $4.00 each. J. I. HERETER, Gettysburg, Pa., R. 4.

Barred Plymouth Rocks (Pullet line) Buttercups and Ancona Cockerels. Also limited supply of pullets. Prices reas. J. K. Cadwallader, Wellsville, Pa. R. 1.

FOR SALE—Purebred Buff Rock Cockerels. Must sell soon, have no room left. Fancy stock $5 to $7. R. J. McPHERSON. Sand Brook, N. J.

POULTRY

SUGAR SHORTAGE HITS THE BEE KEEPER

In certain parts of the country, especially in the white-clover region, there has been a lack of nectar during late summer and fall, and many colonies of bees are not provided with enough stores to last thru the winter and to enable them to build up properly next spring. This lack is especially deplorable just now, because of the bright outlook for good honey markets next year. Bee keepers whose bees are not adequately provided with good honey stores in abundance should do their utmost to get granulated sugar from which a thick sirup can be made to take the place of the honey stores. Nothing but granulated sugar can be used with safety for this purpose.

Thoughts of Thanksgiving

The shortage of sugar makes it difficult to get sugar in quantity for feeding bees. Bee keepers east of Buffalo and Pittsburgh will be compelled to buy cane sugar, while those west of that line must use beet sugar. Either sugar is suitable for the purpose. The Extension Division of New York and the State Department of Agriculture of Pennsylvania are making arrangements to provide bee keepers of those States with sugar. In other eastern states bee keepers will find it difficult to get sugar unless they can combine with others to buy in car lots. Bee keepers west of Buffalo should attempt to buy sugar direct from beet-sugar refineries. Every effort should be made to get sugar, for it will be a great loss if the bees are allowed to die of starvation.

For the many bee keepers who are unable to get sugar at this time, it will still be possible to save the bees by feeding a thick sirup of granulated sugar at the very first of the spring brood-rearing, about the first of March in latitudes such as Washington, somewhat later farther North.. This sirup should be fed hot, and the winter packing should be replaced as soon as the sirup is given and the feeder left packed. Bees wintered in cellars in the far North should be fed as soon as they are removed from the cellar, or, if they are short of stores, sirup can be given not more than three or four weeks before they are removed to the outside stands. Directions for making thick sirup for fall or winter feeding are found in Farmers' Bulletin 695 of the United States Department of Agriculture. In providing stores of sugar sirup it is best to feed in one lot rather than to extend the feeding over several days. The department does not recommend the use of cakes of candy for winter feeding.

With scant winter stores it becomes unusually important to pack bees thoroly for winter to conserve their stores as well as their vitality. Explicit directions for winter care of bees are given in publications which will be sent free on request to the United States Department of Agriculture.

SOIL FOR POULTRY RANGE

A sandy loam soil which is well drained makes the best site for poultry and a wet clay soil is the most unhealthful. A well drained soil does not hold the manure near the surface like sticky clay. The drained site can be used by the birds soon after a shower and the eggs and the nests are much cleaner than when the hens walk on them with feet stuck up with mud.

In selecting the site for the poultry range do not go to the other extreme and choose soil that is so sandy that vegetation will not thrive upon it. Poultry need green food and often a heavy soil can be kept in fine condition for the birds by frequent cultivation to keep the soil sweet coupled with the growing of green crops to furnish healthy food. We believe that fields which will grow fine crops of clover or alfalfa make fine poultry ranges even if the soil is heavier than the ideal sandy loam uusally recommended.

A rolling range is less apt to be wind swept than a level field. In one place we have a low spot that is not drained and the willows grow there abundantly. It is a large water hole in the spring but soon dries out. On windy days or hot days many of the birds dust and scratch in this low spot in the protection of the willows and they obtain many insects in the marshy grass. In theory such a spot is not good on a poultry range but it seems to have much practical value on hot windy days in summer. It is protected from the wind and sun and its best recommendation is the fact that the birds like it and thrive.

When a field is level it can often be protected with fruit trees. A small patch of raspberries in one corner will form a protected spot where the birds can escape the sun and wind. An evergreen windbreak is an asset to the poultryman. Hens that are given good care will thrive on any good soil that can produce a good crop of clover but for the best results avoid the wet soil that is muddy after every rain and the sandy soil which blows around and does not grow a good crop of green food thruout the season for hens.—R. K.

WINTERING BEES

Approximately 1,000,000 pounds of honey valued at $250,000.00, the average product of 25,000 colonies of bees, to which must be added $125,000.00 as value of the dead bee colonies, is the average annual loss to Pennsylvania beekeepers thru careless methods in preparing for the over-wintering of their bees. Such losses are unnecessary, and can be avoided by preparing the bees for winter.

Successful wintering of bees is governed by two factors:—1st, sufficient stores, and, 2nd, protection from the cold, and maintenance of uniform temperature in the hives. Each colony must have at least thirty pounds of honey. If they do not have that amount, supply the deficiency by giving sealed frames of honey. Fairly accurate estimates may be made by lifting each hive. If you do not have the frames of honey and cannot get them, you may be able to secure granulated sugar. Sugar and water are the best substitutes for winter stores. At this time the sirup must be thicker (2 to 2½ sugar to 1 of water), than when prepared earlier in the season. Feed the sirup warm, but do not boil it. If burned or scorched the sirup is worthless for winter bee food.

Cellar Wintering: If you plan cellar wintering, leave the bees on the summer stands until at least the middle of November. After a warm, bright day, when the bees have had a good flight, carefully carry each colony to the cellar. Detailed instructions on wintering bees in cellars are given in Farmers' Bulletin 1014, U. S. Department of Agriculture.

Out-door Wintering: — Out-door wintering can best be accomplished by packing the hives in winter cases, and if the bee yard is in a cold, windy location, provide windbreaks. Winter cases containing one, two or more hives may be constructed according to convenience and available materials, but if they are effective all sizes must be large enough to allow sufficient insolating materials to maintain an even hive temperature. Coses holding four hives have been found thoroly practical and economical in construction. The preparation of bees for out-door wintering is carefully described in Farmers' Bulletin 1012, U. S. Department of Agriculture. Farmers' Bulletins 1014 and 1012 may be obtained by writing to the Bureau of Publications, U. S. Department of Agriculture, Washington, D. C.—J. C. S.

GOOD WHITEWASH FOR HEN HOUSE

Whitewashing the poultry sheds is the most practical, economical, and satisfacory method of makng the winter quarters sanitary. A clean hen house helps to prevent poultry diseases during the winter. A dirty, dark house tends to lessen the vitality of the fowls and to make them more likely to have disease. An application of whitewash tends to make the interior of the house lighter, destroys parasites, and disinfects the premises.

The recipe for the whitewash used by the Wisconsin Experiment Station for the poultry houses on the station farm is given by J. B. Hayes:

Slake quicklime with enough water to make a thick paste. While it is slaking add a pint of melted lard or other grease and a cupful of salt to a bushel of lime. Add enough water to bring the solution to the consistency of thin cream and strain thru a piece of burlap. It is also advisable to add four ounces of some coal tar disinfectant to every gallon of the mixture.

Before the whitewash is applied it is necessary to clean the house thoroly, remove the furnishings, and clean the floor. An application of one part coal tar disinfectant and one part kerosene oil to the roosts and nests will destroy the mites.

Gentlemen: — My Andes One Pipe Furnace is very economical in fuel consumption and heats my ten-room house to perfection.—William H. Turrell, Montrose, Pa., March 31, 1919.

Dear Sirs: — The No. 210 Andes One Pipe Furnace installed for me last fall is a dandy, and for the past winter have had to hold the heat back. It is less work to tend an Andes One Pipe than a stove.—G. W. Miller, Camden, N. Y., March 25, 1919.

Gentlemen:—My house is hard to heat, but with the Andes One Pipe I find it properly heated all over. The Andes is very economical in use of coal. — Mrs. Mary Warman, Pen Argyl, Pa., April 1, 1919.

The Best Heating System Installed In Twenty-Four Hours

It is the best heating system because it gives your home the most healthful, most comfortable heat at a saving of one-third to one-half in fuel bills.

It can be installed in twenty-four hours by one man and a helper, because there are no heating pipes to be put in your walls and floors. There is only one register to be put in the lower floor of the house. That's all. It's usually a half day's job, or one day's at most

ANDES SYSTEM ONE PIPE FURNACE

"Better Heating for Less Money"

You escape all the muss and confusion which the installation of a furnace usually means. And you gain a hundred per cent. in heat comfort because the Andes One Pipe heats all rooms instead of one room as a stove does. You reduce your fuel bills.

Write For Free Booklet

Do not take our *word* for this. Take our *guarantee* instead. We guarantee that if your Andes One Pipe Furnace does not give you complete satisfaction, it will be removed and the full purchase price returned.

We have a book that gives the whole story and tells you what users think of the Andes. If you are interested in cutting down your fuel bills, send back to us this coupon and get a copy of the free book.

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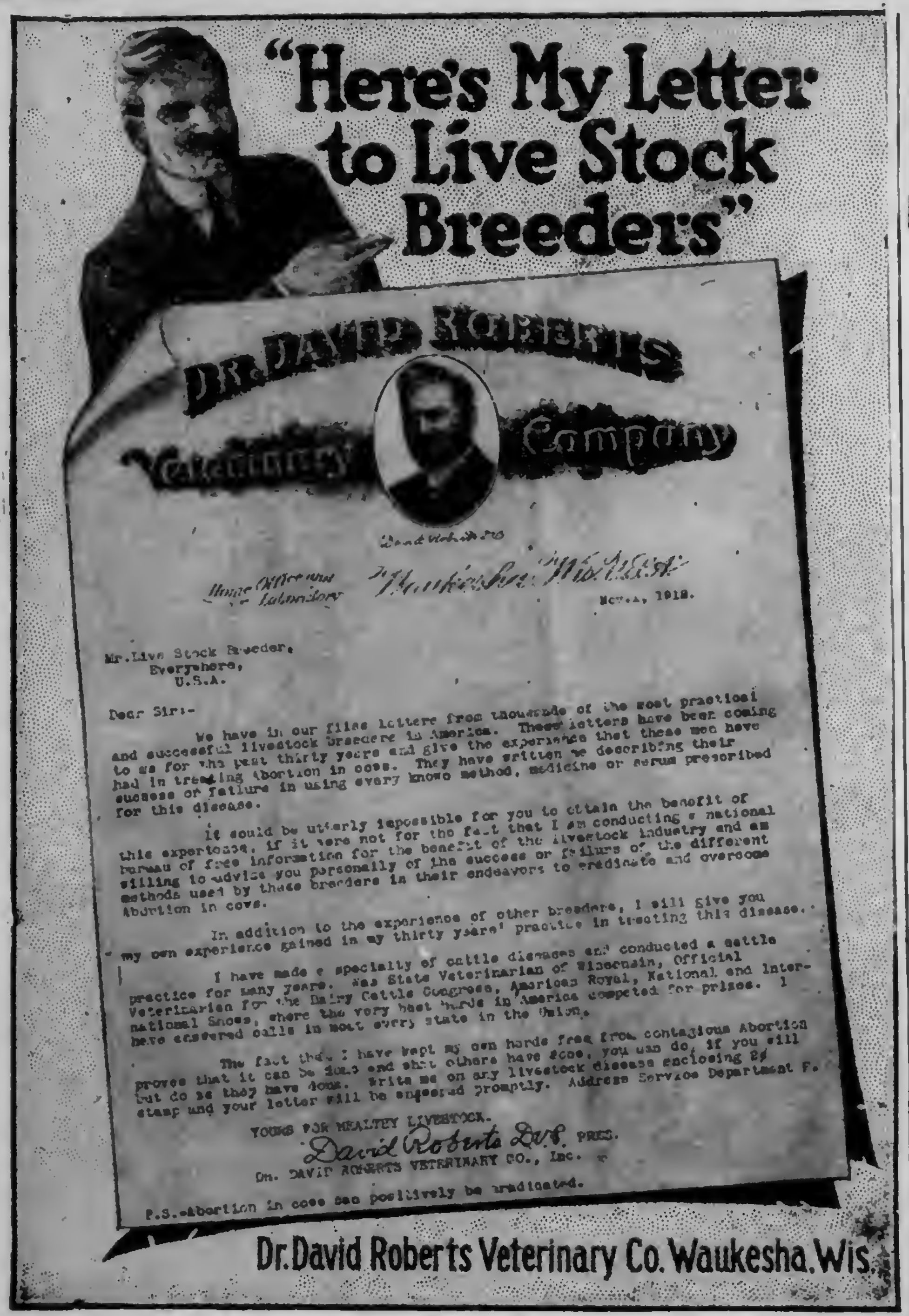
"Here's My Letter to Live Stock Breeders"
Dr. David Roberts Veterinary Company

Home Office and Laboratory Waukesha, Wis. U.S.A.
Nov. [illegible] 1919.

Mr. Live Stock Breeder,
Everywhere,
U.S.A.

Dear Sir:-

We have in our files letters from thousands of the most practical and successful livestock breeders in America. These letters have been coming to us for the past thirty years and give the experience that these men have had in treating Abortion in cows. They have written me describing their success or failure in using every known method, medicine or serum prescribed for this disease.

It would be utterly impossible for you to obtain the benefit of this experience, if it were not for the fact that I am conducting a national bureau of free information for the benefit of the livestock industry and am willing to advise you personally of the success or failure of the different methods used by these breeders in their endeavors to eradicate and overcome Abortion in cows.

In addition to the experience of other breeders, I will give you my own experience gained in my thirty years' practice in treating this disease.

I have made a specialty of cattle diseases and conducted a cattle practice for many years. Was State Veterinarian of Wisconsin, Official Veterinarian for the Dairy Cattle Congress, American Royal, National and International Shows, where the very best herds in America competed for prizes. I have answered calls in most every state in the Union.

The fact that I have kept my own herds free from contagious Abortion proves that it can be done and what others have done, you can do, if you will but do as they have done. Write me on any livestock disease enclosing 2¢ stamp and your letter will be answered promptly. Address Service Department F.

Yours for healthy livestock.
David Roberts D.V.S. Pres.
Dr. David Roberts Veterinary Co., Inc.

P.S.—Abortion in cows can positively be eradicated.

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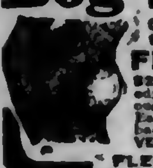

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Annville is situated along the Phila. & Reading R. R. between Harrisburg and Reading. Eastbound trains arriving at Annville at 10.59 A. M. and Westbound trains arriving at Annville at 11.17 A. M. will be met and intending purchasers taken to sale.

Sale begins at 1 o'clock P. M. Sharp. Terms of sale are cash.

HOWARD B. KREIDER,
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S. S. BOMBERGER, Lebanon, Pa., Auctioneer.

THE HORSE AND FERTILITY MAINTENANCE

No consideration of the financial cost of rearing colts, or maintaining work horses can be complete without due allowance for the value of the fertilizing constituents present in the excreta. In the case of growing colts, little is lost thru leaching or poor handling for three-fourths of their time,—or nearly that,—is spent on pasture and the fertilizing constituents go back with very little waste. Work horses spend half their time or more in the fields at work, out on pasture nights when working, or on pasture during idle days; so that here again losses are limited to a portion of the droppings; and this is of considerable importance.

The fertilizing constituents contained in the annual excreta from a growing colt will at present prices, cost $66 if purchased in commercial fertilizers; while a mature draft horse (1,600 pounds in weight) will produce the equivalent of $88 worth. These are theoretical figures, however, and the farmer is interested in knowing what crop gain he can count on. The draft colt we have considered, will average 10 tons excreta per year; the draft horse 13 tons. The value of this in increasing crop yields has been indicated by the Ohio Experiment Station, where Director Thorne reports that where 8 tons per acre of barnyard fertilizer was applied every three years, the gain in crops over a nine year test period, demonstrated that each ton of such fertilizer gave an annual gain for nine years of 2.4225 bushels corn, 134.55 pounds stover, 1.24625 bushels wheat, 128 pounds wheat straw and 163.625 pounds clover hay. In other words each ton of barnyard fertilizer, so used, produced a gain in crop of the amounts of grain and forage named; and on present day prices this would make each ton worth $8.20 in increased crops. On this basis the gain in crop would be worth $82.00 in the case of the colt, and $106.00 in the case of the work horse.

These figures, however, are not comparable to our needs, for Thorne's experiments were carried out on land of low fertility, which produced, untreated, but 37 bushels of corn per acre; and no such gain could be expected on land as productive as that we have considered in figuring our crop yields. Some gain would unquestionably occur, however, especially if the fertilizer produced were supplemented with a moderate amount of lime stone and raw rock phosphate. One Illinois farm so handled, has increased corn yields from 35 to 80 bushels per acre within 15 years, and the expenditures for phosphate and lime have been trifling in amount; and another Illinois farm where horses have been reared in numbers for 30 years, and where barnyard fertilizer alone has been used, produced in 1917, 115 bushels of oat to the acre. These instances indicate the possibility of increases in yield thru the use of the fertilizing constituents found in the annual excreta from horses.

Prize Winning Duroc-Jerseys at N. Y. State Fair. From Farm of C. C. Corbin, Duchess Co.

PASTURES MAKE PORK

Each year the pasture method of pork production has been gaining more and more converts thruout New York and Pennsylvania and with the price of grain going higher and higher, it looks as if we will have to make even more extensive use of forage and pasture crops during the coming season if any profit is to be made on hogs.

If pasture of alfalfa or rape is available spring pigs will make surprising gains on it provided a small amount of grain is supplied to the young porkers. Two pounds of corn feed daily per 100 pounds of pigs has given the best results in making cheap gains on pasture. A greater quantity of grain will result in faster gains but the cost per pound of gain will be greater. I do not think it is advisable to try to raise pigs on pasture alone.

Making use of pasture and forage crops not only saves expensive concentrates but the succulent feed and the exercise that the pigs obtain, keeps them in a healthy and vigorous condition. If, at the end of the pasture season the pigs are not ready for market, they will be in excellent condition to make big gains in the dry feed lot, where they may be finished off. Brood sows on pasture and not suckling pigs will generally make greater gains than the pigs on the same amount of grain.

Alfalfa is the best permanent pasture crop for pigs, as it provides feed during a longer season than any other crop and remains green and succulent long after other crops have dried up or become too woody. Too heavy pasturing of alfalfa however, will result in injury to the stand and only a limited number of pigs should be turned onto it, allowing the plants to grow up and cutting twice, during the season, for hay. Alfalfa tends to balance the corn ration and very good gains have been made where only thse two feeds were used. However even better results were obtained where a small amount of tankage was fed along with the alfalfa and corn diet.

Rape is without question the best annual forage crop for hogs as it supplies a heavy growth of succulent feed, is palatable and can be planted at different times thruout the growing season to furnish a continuous supply of pasture. If not pastured too close, spring crops of rape will continue to grow until fall. Pigs should not be turned into a rape field until the plants are at least 10 inches high and preferably about 15 inches.—H. T. B.

MY PIGS

The pig club was first started in Warrington township during the summer of 1917. I became quite interested in the club and joined it. I tried enthusiastically to raise a pig and of course I meant to get the first prize. But the fates decreed a little differently. Altho I lived on a farm I had no idea how to raise a pig according to club rules and I met discouragement, rather than praise, on all sides. My pig was sick part of the time and became stunted and when the pigs were weighed up he was among the smallest. But I had some consolation, he was a nice looking pig and pulled in a lot of undeserved praise, partly because he was a pure bred pig. I received a prize of fifty cents for him.

A Pig Club Girl and Her Pig

My defeat did not crush me however, it only helped to fan my ambition into new flame because after that, I read every bulletin I could get on the subject of raising pigs. When the club opened in 1918 I had a Poland China pig well shaped and well bred.

I fed him a mixture of feeds most of them being home ground. I mixed ground oats, wheat middlings, corn meal, and tankage together dry and then mixed them with milk to make a thick batter. My pig surely did grow on that mixture.

My pig weighed 28 pounds when the club started and at the end of the 140 day period he weighed 259 pounds making a gain of 231 pounds. I spent $22.50 for his feed and other expenses. When I sold him I got twenty-eight cents a pound or $67.50 for him. I made $45 for my summer's work, and besides my pig won the first prize, which was a pure bred Berkshire hog. I still have that pig and he has grown almost as fast as my club pig did and on about one half of the feed.

I sold my pig while the drive for W. S. S. was going on so I invested my money in stamps. But I raised and sold three pigs, and when I received my money and had it invested I was the proud possessor of one liberty bond and one hundred dollars worth of W. S. S.

I saw a Berkshire sow pig, nine month sold, for sale for $15 last summer. I jumped at the chance and bought her immediately and kept her. Up-to-date she has had four litters of fine pigs. I kept a sow out of the first lot and she had two litters. They average about nine pigs to a litter.

At the present time I have a total of 35 pigs. Each sow has nine pigs apiece five weeks old at present, and besides I have a few seven months old, and the three old ones. I am going to college this fall with the money I saved from my pigs and I have made a bargain with my father to care for my pigs while I am away.

I read somewhere that a sow was a savings bank in which one could put his money and draw it out with large interest. I believe that statement now. My pigs have been a paying proposition for me so far and I sincerely hope they will be for some time to come.—Sara Worthington, Warrington, Pa.

THE BROOD SOW

Among some farmers it is the practice to fatten and kill the brood sow after she has had a litter or two of pigs and put a young sow in her place. A little consideration will show this to be a wrong thing to do. A mature sow will generally throw more pigs and better ones than a young one, and have a greater supply of milk to push them along. In addition, she usually is less nervous and excited at farrowing time, and a better mother for that reason. A sow that throws large litters of husky pigs, is a good mother, and a good milker, is a valuable animal, and should be retained as long as she remains a good breeder and does not get clumsy. I have two sows, among others, which altho of much mixed ancestry, have been very profitable. Bred to a pure-bred Berkshire boar, one has returned twenty-seven pigs in three litters—seven, nine and eleven; while the other has thrown twenty in two litters—nine and eleven. As the sows become older, the size of litters increases. If I had sold the little pigs at five dollars each as weanlings, these two sows would have returned me $235 in two years, a large part of which would have been clear. Naturally, I should hate to part with these moneymakers, especially when I consider the experience of a neighbor, who got a grand total of eleven pigs from five brood sows at the spring farrow.

The other day I saw a young sow hardly more than a pig herself—with a litter of three rather small pigs. She had been bred too young. It would probably have paid to have waited until she was eight months old at least, until she had got a little more size and strength to enable her to produce a larger litter. As a rule, a sow must produce six or eight pigs at a litter to be profitable, and if she does not do this by her second litter, the best thing to do is to fatten her.—R. L. Scharring-Hausen.

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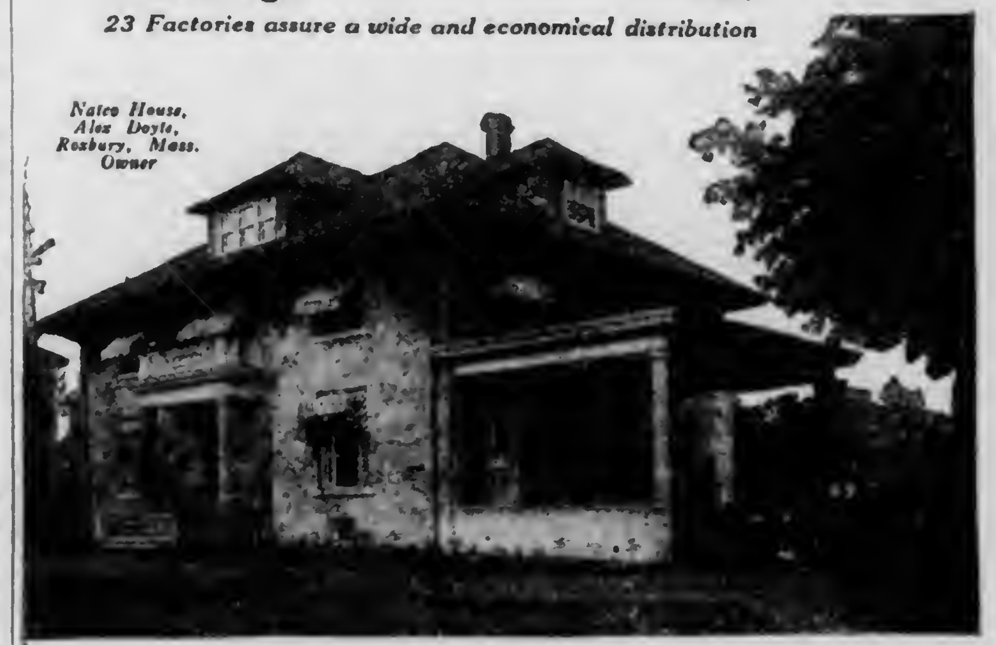

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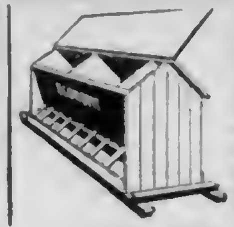

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HOUSEHOLD

SOME THANKSGIVING MEATS

Take Your Choice For the Dinner

Roast Turkey With Raisin Dressing

Have the turkey well cleaned inside and out, with the lungs out. Rub the inside with salt and pepper. For the stuffing: Heat 1 pint of milk, then break into it pieces of stale bread and let heat until they are softened quite a bit; then remove from the stove and stir in 2 well beaten eggs, season with salt, pepper and sage and 1 tablespoon of butter, and lastly add ½ cup seeded raisins. Put this stuffing in the turkey while it is hot, and sew up the openings. Lay strips of bacon on top of the turkey, and roast in a moderate oven, basting frequently with the bacon fat which melts out of the strips. A young turkey weighing about 10 lbs. should roast in about two hours.

Roast Duck

Clean the duck, and wipe it dry inside and out. Cut the neck long enough so that it can be tucked around under one of the wings. For the stuffing you will need, for a duck weighing about 5 lbs., 1 cup cold boiled potato, 1 very small onion, 1 egg, 4 slices dry bread, piece of butter size of an egg, salt, pepper and 1 cup milk. Soak the bread in the milk, put the potato thru a sieve, then mix with the bread, add the onion chopped fine, the beaten egg and the butter cut into bits and the salt and pepper. Fill the cavities with this dressing, and sew up the openings. The legs, wings and neck should be tied closely to the body. Rub the outside well with salt, dredge with flour, put into a very hot oven, and baste every 10 minutes while it is roasting. There is oil enough in the duck to take the place of other fat for the basting. Lower the oven heat after 20 minutes, and bake for about one hour. Boil the giblets in water 30 minutes, chop fine, pour the drippings from the roasting pan into the water in which the giblets were cooked, add salt, a dash of pepper, and thicken with cornstarch, cooking until the cornstarch is done. Serve this as gravy.

Roast Pig

Clean a pig not more than five weeks old Stuff with either of the above dressings, and truss down the legs, so that they will not stick up and burn so readily. Lay on a rack in your roasting pan, brush the surface with melted butter, make four gashes on each side of the backbone. Put in a hot oven, cover with buttered paper, and roast 2½ hours, basting frequently. When you lay the pig on the serving platter, garnish with white celery tips, put a red apple in the pig's mouth, and serve with red apple sauce, made by quartering red-skinned apples and baking in the pan beside the pig, having put them in just long enough before the pig is done to get the apples at the properly done stage. Sprinkle a little sugar over the apples just as you take them from the oven.

Roast Chicken

Clean a large fat hen, stuff with the following dressing: Mix together 1 pint dry bread crumbs, ½ cup chopped very fat salt pork, salt, pepper, onion to taste, 1 freshly beaten egg, and 1 cup rolled crackers; moisten with hot milk, and bind into the fowl with strips of white cloth while you are steaming the fowl, which you should now do for an hour. Then remove the strips of cloth and finish the fowl in a slow oven for another hour.

Gravy.—Skim the liquor if it is too fat after steaming of the fowl, and use it with which to baste the fowl while it is baking. Then thicken this liquor in the baking pan with browned flour. If the fowl's skin seems to dry when removed from the oven, rub on a little butter.

Oyster Croquettes

Melt 2 tablespoons butter in a saucepan, stir in 3 tablespoons flour, and when blended stir in a pint of hot milk, season with salt and pepper, and carefully stir in a cup of oysters cooked very slightly in their own liquor. Spread this paste two inches thick on a buttered dish, and when cool form dessert spoonfuls into rolls, roll around in cracker crumbs, then in beaten egg, and fry in deep hot fat; drain on brown paper, and set in a warm oven until ready to serve. They could be served as decoration around the turkey on the platter, but they would be sort of an extravagance thus used, because they are themselves a light meat dish. They are better for a light lunch or supper.

Chicken Loaf

If the Thanksgiving dinner must be a rather economical one this year, try this meat dish: Cook a chicken until tender, remove the meat from the bones, and mix with about 1 quart of bread crumbs. Let the chicken broth cool, pour it over the bread, and meat; chop two onions fine, add some sage, salt and pepper to taste, put in a pan, and bake until well browned.

Stuffed Ham

Remove the bone from a ham, and fill the cavity with a stuffing made of bread crumbs, moistened with butter, and seasoned with parsley, marjoram, white pepper and one chopped green pepper. Sew into the ham securely, and cover the ham with a paste of flour and water to keep the juice from escaping from the ham. Tie up in a pudding bag, put in a kettle of hot water, and boil gently for two hours. Then remove the ham, peel off the skin carefully so as not to injure the shape of the ham, and lay it in a roasting pan, sprinkle well with bread crumbs, set in a moderate oven and roast, allowing six minutes per each pound of the ham.—Helen Lyman, Mass.

If an umbrella handle comes off the rod it may be fixed by filling the hole with powderd sulphur or rosin. Heat the ferule and push it in; then let it stand until cold.

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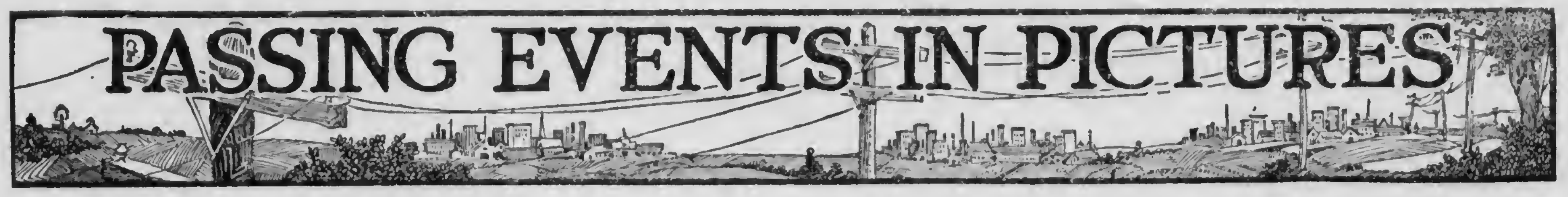
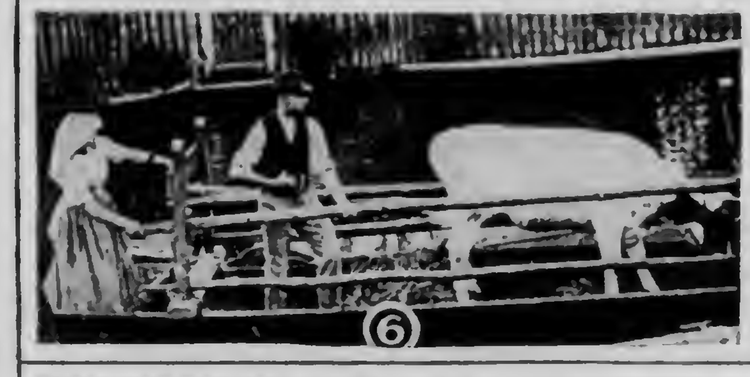


PASSING EVENTS IN PICTURES



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PENNSYLVANIA FARMER, 261 South Third Street, Phila., Pa.

AROUSED ON SCHOOL TOILETS QUESTION

For 30 years New York State has had on its statutes an act known as the health and decency act, requiring trustees of rural schools to furnish adequate school toilet accomodations, shirking of the duty being penalized by withholding the public money from the district and making the trustees responsible to the district for loss of the same.

This was interpreted so negligibly by rural districts in general that in 1916 the legislature passed a bill allowing the Board of Regents to specify what should be regarded as adequate accomodations, and allowing the districts until December 31, 1919 to comply with the specifications the board should see fit to recommend. A few sections complied with the published requirements in this respect in 1917 and 1918 but the big majority of rural districts let their school toilets go in the same old careless often disgracefully filthy way until notified this summer very definitely that some system of chemical or running water toilet must be installed before the close of the year or the penalty must be met.

In the meantime the Board of Regents had decided not to approve any chemical toilet excepting those put out by a few certain manufacturers. No mail order type, or that sold at moderate prices by local dealers would be accepted. They must be of a heavy iron construction, buried in the ground, and the entrance to the toilet room must be enclosed and must open directly out of the school room where it would be under the eye of the teacher.

This is really a wise decision for the larger rural schools. But no modifications were made in favor of the smaller districts, unless such should have less than $20,000 valuation or should be considering consolidation. Very, very few districts have less valuation than this and so there is much excitement in farming sections over this matter.

In the writer's county or neighborhood one district, with but 12 pupils has installed the two required toilets at an expense of $400. The expense would have been much more had not the district contributed a large share of the labor, which the department of education says in a published announcement to be the biggest factor in expense. Another district with ten pupils has installed one at a cost of $250. Another that has but three pupils, all little boys, secured special permission to install but one toilet at an expense of $125. Two others near by spent $400 and $250 respectively in this way.

Another district, larger and richer than any of these, and with 25 pupils is making no move to comply with these requirements and it is announced that many will stand suit before they will comply.

It would seem that the most valuable feature of the new ruling is that the entrance to the toilet must be closed and must lead out from the school room—so as to be under supervision of the teacher. It is easy to see that carelessness and neglect on the part of pupils, and permitted or tolerated by the teacher can make conditions as shamefully bad as they have been in the past. Boards may come off from this covered passageway and may remain off as has occurred too often in the past and the interior may be defiled as it always has been defiled in some districts. These things are shameful and should never be tolerated. But such premises could have been cleaned up and put in order, with proper entrances and the district superintendent or the visiting nurse or some other authorized person could have been required to inspect and report the conditions monthly, or semi-annually, as seemed best. Poorer districts should have had some concessions, while being forced to present sanitary and decent conditions.

There is no provision for regular inspection under the new system and the shiftless teacher or timid young high school substitutes serving as teachers will doubtless let abuses follow as they have in the past.

The first three districts quoted have this year spent a little over $2600 to educate those 25 pupils or about $114 per pupil. None of the schools have given even fair service and in the three districts a dozen pupils in the eighth grade and lower grades were sent at great trouble to their parents and extra expense for tuition to high schools or city schools 4 to 6 miles distant, because they wanted their children to have better advantages.

Now that they have purchased the toilets, and have seen how much money they have spent for very poor results these districts are waking up to the fact that they are all on or very near a stone road, that two other schools not far away are also on that same main trunk improved road and that the wise thing to have done would have been to have consolidated erecting an adequate building within reach of all. The $4,000 to $4,500 now spent by the five schools would hire several higher class teachers, and even a high school might be maintained, or at least the first two years work taught and all the children in that territory might have better advantages without leaving home 5 days of the week at a tender age. So in one way the seemingly harsh rulings on toilets may be a blessing by forcing consolidaiton in this state.—F.

THE DESK PHONE

Just why it is that farmers do not have a desk phone as well as the city resident seems a little queer at first. Yet when I come to think of it the real reason is that we are so easy that we take anything that comes along and grumble a little but don't make any real kick.

I have had a desk phone on this farm every since I've lived here and also was able to get one on the home farm when I lived at home. A desk phone is as far ahead of the old fashioned wall phone as any phone is ahead of a one wire private phone. Just why country folks are asked to stand up to talk when an easy chair is always available in the room is more than I can figure out. More than that one can talk a lot better from a comfortable position than from a tiresome one.

There are one or two phones in this neighborhood that set on a library table. An easy rocker is beside the table and there real comfort is taken with the telephone. Especially is such a phone handy when the "longwinded" neighbor calls you up.

When you ask for this kind of a phone the company will bluff you if they can. They say a desk set gets out of order sooner. Ours have been out less than the wall phone used to be at home. Desk sets are made right and of best material. The company will tell you that they cost more. Find out if there is a difference of much over a dollar in the costs. Its worth that difference if you have to pay it.—Earl Rogers O.

FARMER JOHN'S PHILOSOPHY

John Farmer's not a college man,
  But he isn't any fool—
He's learned a lot of common sense
  That he couldn't get in school.

He owns a quarter section
  Of good old valley dirt,
And a heart that's even bigger
  Beats behind a colored shirt.

Joe Jimson is a different man—
  He likes his little sprees,
And wears his Sunday breeches
  A-baggin' at the knees.

He boasts about his liberty,
  And his breakin' of the laws,
And says that prohibition
  Has got a lot of flaws.

Last night John stopped his gas machine
  Beside Joe Jimson's gate,
And while they whittled on a rail,
  They talked about the state.

Said Joe to John: "I'll be doggon
  If that old water-wagon
Isn't ketchin' most the Congressmen,
  And the rest of them are taggin'."

Said John to Joe: "Old Booze must go—
  No straddlin' of the fence—
Our fifty years' experience
  Should teach us both some sense.

"You remember when our oats and wheat
  Was mostly cheat and smut,
But since we're buildin' better roads
  We're gettin' out the rut.

"Now we use a little vitriol wash,
  And pick the seed we sow.
It takes a little watchin'
  But the pests have got to go.

"Our sheep and cattle had the scab,
  Our horses had the mange,
And the chickens were a lousy lot,
  Till we organized the grange.

"The bedsteads all were buggy
  On the ranch I bought below,
But if you live with Lizzie
  The bugs have go to go.

"It was kerosene and bug dust,
  And turpentine and paint,
Till whatever life there might have been,
  She's just as sure there ain't.

"We have chucked tuberculosis,
  And the deadly typhoid foe,
And we're on the trail of cancer,
  For the germs have got to go!

"The skunks they caught the chickens,
And only left the quills,
Till we stopped their license system
  By a dose of shotgun pills.

"But another thing needs killin',"
  Said Farmer John to Joe—
"It's the rankest skunk a-livin'
  And the scab of every woe.

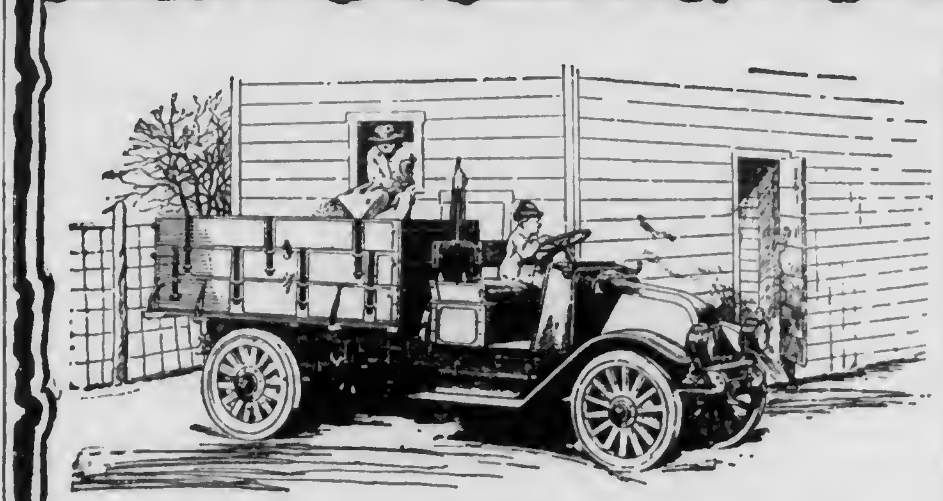
"It doubles up our taxes,
  And skins the country slick;
It's the smut upon the linen
  Of our body politic.

"It drills with thugs and anarchists,
  And fattens on the loot;
It turns a girl into a hag.
  And a boy into a brute!

"It's the lazy, bloated body louse
  On Uncle Samuel's back!
It's the slimy leech that sucks his blood,
  And keeps him on the rack!

"It's the old saloon, and he'll get his,"
  Said Uncle John to Joe,
"For sure's the world is movin'
  The parasites must go!"

W. S. GORDON.



28,000,000 Pounds
100,000 Miles
3 Years!

THREE years ago Fred Weaver, who lives at Creston, Iowa, bought a Model "F" 1-ton **International Motor Truck.** Mr. Weaver, like other men who have a large volume of heavy hauling—in fact, "hauling" is his particular business—was in some doubt as to advisability of buying a motor truck. But—read what he says today:

"I have hauled about 4,680 tons (9,360,000 pounds) per year and have averaged about 100 miles per day. I have done all kinds of heavy hauling, both short and long hauls, **over the worst kind of country roads.** After using my truck at this heavy work for three years, I am satisfied that the **International** is the best truck that I have ever seen when it comes to doing hard work year after year. I have had good service from the truck and the Harvester Company and am well pleased."

Mr. Weaver states further that he has covered between 90,000 and 100,000 miles with his truck during the three years he has had it and has hauled approximately 28,000,000 pounds. How many years would it take you to haul 14,000 tons of farm produce and travel 100,000 miles—almost four times around the globe—with your team and wagon?

Whether you have a short or long haul, an **International Motor Truck** will save you much valuable time. Write for descriptive literature.

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Headers Rice Binders
Harvester-Threshers Reapers
Shockers Threshers

Tillage Implements
Tractor Plows Riding Plows
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Tractor Harrows
Spring-Tooth Harrows
Peg-Tooth Harrows
Orchard Harrows Cultivators
Culti-Packers

Planting and Seeding Machines
Corn Planters Corn Drills
Listers Cotton Planters
Grain Drills Broadcast Seeders
Alfalfa and Grass Seed Drills
Fertilizer and Lime Sowers

Haying Machines
Mowers Side-Delivery Rakes
Comb. Side Rakes & Tedders
Tedders Loaders (all types)
Baling Presses Rakes
Sweep Rakes Stackers
Comb. Sweep Rakes & Stackers
Bunchers

Belt Machines
Ensilage Cutters Corn Shellers
Huskers and Shredders
Hay Presses Stone Burr Mills
Threshers Feed Grinders
Cane Mills

Power Machines
Tractors Engines
Motor Trucks
Motor Cultivators

Corn Machines
Planters Motor Cultivators
Listers Lister Cultivators
Drills Ensilage Cutters
Cultivators Binders Pickers
Shellers Husker-Shredders

Beet Tools
Seeders Pullers Cultivators

Other Farm Equipment
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Manure Spreaders
Straw Spreading Attachment
Farm Wagons Stalk Cutters
Farm Trucks Knife Grinders
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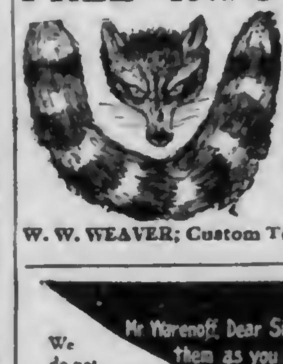

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Markets

PHILADELPHIA BRODUCE

Philadelphia, Pa., Nov. 17, 1919.

Notwithstanding the fact that supplies of Potatoes are heavier than they have been at any previous time this season the market is ruling firm with strictly fancy sack stock a little higher, there were over 200 cars of potatoes here today, most of which were from Pennsylvania, New York State, New Jersey, Maine, Maryland and Delaware. The Pennsylvania stock is selling all the way from $2.65@3.00 per cwt. New York State potatoes sold mostly from $2.50@2.65; Maines from $2.50@2.75. Most of the New Jersey potatoes are in sacks, which are selling at $3.75@3.90 per 150-lb. sacks for the Giants, and the round stock at $4.00@4.25. The Eastern Shore potatoes in barrels are selling from $3.75@4.10 per barrel. Quite a few potatoes are still being hauled in by the nearby farmers and these are selling at 80c@$1.10 per §-bushel basket. Sweet potatoes were quite heavy and the advance in the market as we quoted in these columns last week was not maintained. There were fourteen fresh cars of sweet potatoes here this morning and most of the Eastern Shore stock sold at $3.75@4.00 per barrel, with No. 2's at $2.75. Maryland and Delaware sweets sold from $1.40@1.60 per bushel hamper. The nearby New Jersey stock ranged from $1.10@1.40 per §-bushel basket generally, with a few extra fancy house sweets at $1.50 per basket. Southern yams, on the other hand, show an advance of about 50c per barrel over the low prices prevailing a week ago and sales are now being made at $3.50@4.00 per barrel.

Vegetables

Green beans are in very light supply and fancy stock is selling from $4@$5 per hamper. There are practically no wax beans on the market. The advance in nearby bunch beets as noted in these columns last week was only of short duration, as under increased supplies the market declined, and $3@$4 per 100 bunches is now the prevailing price. Loose beets are practically unchanged but dull at $1.50@2.25 per barrel. Brussel sprouts are in light supply and higher, fancy selling at 22@25c per quart, with poor at 18@20c. The advance in the cabbage market as noted last week brought out heavy supplies and today there are about 115 cars of cabbage here and the movement is rather slow, with Danish selling from $28@35 per ton, and domestic from $22@28 per ton. Pennsylvania carrots are firmer and selling from $2.50@3.25 per barrel for loose, while the bunch bring from 2½@3c per bunch. A car of New York State rough and unwashed carrots sold here this morning at $1.70 per 100-lb. sacks.

Cauliflower is very scarce and high prices are prevailing. One car of ordinary Long Island stock selling here today at $4@5 per crate. Fancy celery is firm and higher, New York State rough celery selling from $3@5 per crate and when washed and bunched brings from 35@60c per bunch. Good Pennsylvania and New Jersey grown celery is selling from 7@10c per stalk. Cucumbers are scarce and readily bring from $3.50@5.25 per box. Egg plants are also in light supply and selling all the way from $3@5 per box, as to quality. Garlic continues steady and unchanged at 20@30c per lb. Horseradish is very scarce and fancy stock is selling around $12 per cwt. Fancy lettuce is firmer and higher, but poor lettuce is not wanted. Good New Jersey lettuce sold today at $3@3.50 per box, while some ordinary sold as low as $1.50 per box. One car of poor New York State lettuce sold this morning at $1.25 per hamper. Virginia grown lettuce is mostly all poor, and while a little sells at $2@2.25 per hamper, most Virginia lettuce is only good enough to bring $1@1.50 per hamper. Two cars of California lettuce sold here today at $5.25@5.50 per box.

The high prices prevailing on mushrooms last week brought out more mushrooms than the trade wanted and prices are not half as high as they were a week ago, sales now being made at $1@1.50 per 3-lb. basket. Okra continues scarce and fancy is still selling at $3@4 per crate. Onions have been showing a small advance nearly every day since our last report and prices are now 50@75c a sack higher than they were a week ago. Good No. 1 yellow onions are now selling at $5@5.50 per sack with No. 2's at $2.50@3, and unless supplies get heavier the prospects are that the market may go still higher. Parsley is a little firmer at $1@1.50 per hamper. Fancy peppers continue scarce and nearby New Jersey peppers in bushel hampers bring $1.50@2, while strictly fancy Southern peppers are selling from $2.50@3.50 per crate, with the outlook for still higher prices. Romaine remains about steady and unchanged at $1@1.50 per box or hamper. Radishes are in only moderate supply but there is a wide range in the quality which makes the wide range in prices of 50c@$2 per 100 bunches.

As was noted in these columns last week, the season on nearby grown tomatoes is at an end but supplies are coming more freely from distant points, especially from California, three cars of which were here today with sales ranging from $2.50@2.75 per lug. Southern tomatoes are showing mostly too green condition as yet and are too irregular in price to quote intelligently. Parsnips are in light supply and firm at $2.75@3.25 per barrel, with New Jersey and Pennsylvania furnishing all offerings. White turnips show a very wide range in quality and condition, most sales ranging from 30@35c per §-bushel basket, with some extra fancy well-washed at 40@50c per basket. Pennsylvania yellow turnips continue firm at 65c@$1 per §-bushel basket. There were about ten cars of Canadian rutabagas here today but many of them are large and oversize and they are moving slowly at $1.30@1.75 per cwt. New Jersey spinach is about steady at 50@65c per basket.

The offerings of apples are fairly plentiful and while prices are showing very little change over prevailing prices of a week ago the market is inclined to be a little easy, as only strictly fancy fruit is bringing top quotations, and ordinary and ungraded apples are inclined to be a little slow and we would not be surprised to see prices show a little decline. At this writing the various varieties of apples are selling at about the following range, per barrel: Baldwins, $5@8.25; Ben Davis, $4@6.25; Black Bens, $5@6.25; Black Twigs, $5@8; Ganos, $4@6.25; Greenings, $5.50@8.50; Grimes Golden, $7@8.50; Jonathans, $6.50@9; Hubbardsons, $6@7.50; Kings, $6@8; Spys, $5@8; Stayman Winesaps, $6@8; York Imperials, $4@7; Winesaps, $5@7.

Poultry

With the Thanksgiving holidays approaching there is more activity in both the live and dressed poultry market and while supplies are more plentiful the market is ruling firm and active at about the following range of prices: Live poultry, heavy fowls, 32@35c; inferior and light fowls, 25@30c; fancy chickens, 28@30c; inferior, 23@26c; old roosters, 21@22c; ducks, 28@34c; geese, 26@30c; turkeys, 35@40c; dressed poultry, fancy nearby turkeys, 45@48c; western turkeys, 45@48c; fowls, heavy, 36@37c; medium and undersize, 25@32c; nearby broiling chickens, 43@48c; other broilers, 35@45c; old roosters, 25@26c.

Eggs

Under the continued light supplies there has been an advance of fully 2c per dozen and the market is now ruling firm and active with strictly fancy new laid eggs from nearby points bringing a premium over quotations, which are as follows: Pennsylvania and other nearby current receipts, 70c per dozen; nearby firsts, 72c; western firsts, 66@69c, and western extra firsts, 72c.

The rabbit season is now open and there is a good, active demand for rabbits at about the following prices: Cotton tails, per pair, 75@90c, with undersize at 35@50c; Jack rabbits, $1@1.35 per pair.

LANCASTER PRODUCE MARKETS

Lancaster, Pa., Nov. 17, 1919.

Farmers today gave due warning that few turkeys will be offered here for the Thanksgiving trade because of the acute shortage, and that those which are sold will demand sixty cents a pound dressed. Last Spring's protracted wet spell caused most of the young turkeys to die. Prices today were firmly held, and business was generally good.

Butter and Eggs.—Creamery butter, 75c per lb.; country butter, 75c; Fresh eggs, 78@80c per doz.; duck eggs, 60c; goose eggs, 10c each.

Poultry.—Dressed old chickens, $1.25@1.75; dressed young chickens, 85c@$1.30 each.

Vegetables.—Beans, 10@12c ½ peck; tomatoes, 10@15c box; lima beans, 20c qt.; cabbage, 5@10c head; lettuce, 15@20c head; sweet potatoes, 25c ½ peck; potatoes, $1.65@1.75 bu.; do., 25@30c ½ peck; turnips, 15c peck; spinach, 20c ½ peck.

Fruit.—Apples, 40@50c ½ peck; pears, 20@25c ½ peck.

Grain Market.—Wheat, $2.20 per bu; rye, $1.60; corn, $1.05; oats, 75c; timothy hay, $28 per ton; mixed hay, $26; wheat straw, $11; oat straw, $10.

YORK PRODUCE MARKETS

York, Pa., Nov. 17, 1919.

Market conditions were unchanged the past week. The amount of produce is becoming less each week from the country, while it is the beginning of the harvest for the hucksters. Prices are much firmer for all lines except potatoes. Apples are moving better now, as most of the cull stock has been disposed of. Poultry is very dull.

Eggs. 75@78c per doz.

Butter.—Country, 65@70c lb.; separator, 70@75c. Milk, 12c qt.

Poultry.—Hens, 22@24c lb.; springers, 24@26c lb.; dressed, 75c@$1.75 each.

Vegetables.—Potatoes, 15@25c. ½ peck; $1.50 per bu.; cabbage, 3@8c head; lettuce, 5c head; beets, 5c box; radishes, 5c bunch; onions, 5c bunch; 15@20c. ½ peck; lima beans, 15@25c qt.; soup beans, 15@20c qt.; celery, 3@8c stalk; lard, 38@42c pound; turnips, 10@12c. ½ peck; spinach, 10c ½ peck; apple butter, 45@50c quart.

Fruit.—Apples, 15@50c ½ peck; $2@3 per bushel; pears, 10c box; 15c ½ peck; quinces, 5@10c each.

Retail Grain Market.—Wheat, $2.40; corn, $2.; oats, $1; rye, $1.68; bran, $3 per cwt.; middlings, $3.50 cwt.

Wholesale Grain Market.—Wheat, $2.20; corn, $1.60; oats, 90c.; rye, $1.45; bran, $48 per ton; middlings, $68 per ton.

BALTIMORE PRODUCE

Baltimore, Md., Nov. 17, 1919.

Butter.—Creamery, western fancy, 69@70c; choice, 68@69c pound prints, 70@71c. Nearby rolls, 45@46c; Dairy prints, 45@46c.

Eggs.—State, Pennsylvania and nearby, 65@66c. Eastern Shore and Virginia, 65@66c. Southern, 62@63c.

Live Poultry.—Springers, 30c pound; old roosters, 20@21c; old hens, 30c lb.; ducks young, 28@30c; do., poor, 24@25c; guinea fowls, 90c@$1.00.

Grains.—Bag lots by sample, $2.18@2.32. wheat, new, No. 1 red, $2.30 do., No. 3, $2.32; garlicky, $2.18; Corn, $1.50; Oats, standard white, 80@81c; Rye, nearby, $1@1.50.

Hay.—No. 1 timothy, $31.50 ton; do., standard, $30.50 ton; light clover, mixed, $29@30 ton, Clover, mixed, $27@28. Tangled rye straw, $14.50. Wheat straw, $12@13. Oat straw, $14@15 ton.

Western Spring Bran, per ton, in 100-pound sacks, $42@43; City Mills Winter Bran, per ton, in 100-pound sacks, $50; brown middlings, per ton, in 100-pound sacks, $55; white middlings, per ton, in 80-pound sacks, $67. Quotations on City Mills feeds are jobbing prices.

NEW YORK PRODUCE

New York, Nov. 17, 1919.

Butter firm: receipts 7869: creamery, higher than extras, 71½@72c; creamery extras (92 score), 71c; firsts 62@70c; packing stocks, current make, No. 2, 49@49½c.

Eggs firm: receipts, 5376; fresh-gathered extras, 76@77c; extra firsts, 73@75c; firsts, 68@72c; state, Pennsylvania and nearby western hennery whites, fine to fancy, 90c@$1; state, Pennsylvania and nearby hennery whites, ordinary to prime, 75@97c; state, Pennsylvania and nearby hennery browns, 78@80c; do., gathered browns and mixed colors, 76@77c.

Cheese steady: receipts, 2022; state, whole-milk flats, twins current-make specials, 31½@33c; do., average run, 31½@32¼c; state, whole-milk twins, current-make specials, 31½@32c; do., average run, 31c.

Live Poultry steady; chickens, 26@27c; fowls, 20@30c; old roosters, 20c; turkeys, 35@40c. Dressed steady; fowls, 24@36c; chickens, 27@45c; old roosters, 21@23c; turkeys, 39@47c.

Vegetables.—Potatoes, Long Island, $5.25@$5.75 per 165-lb. bag; Jersey No. 1, $3.50@4.50 bag. Beans, green, $1@4 basket; do., lima, $3@4.50 basket. Beets, $2@$2.25 per barrel. Carrots, $2@2.50 per bbl. Cabb- $3@7 per 100. Lettuce, $1@3 basket.

Fruit. — Apples, McIntosh, $5@13; Wealthy, $4.50@6.50. Baldwins, $4@8; Northern Spy, $4@10.

PITTSBURGH PRODUCE

Pittsburgh, Pa., No. 17, 1919.

Butter.—Creamery, 73c; tub, 72c; cooking, 56@57c; nearby dairy, 68@69c.

Cheese.—New York full cream, 35@36c. Ohio, 34@34½c. Wisconsin, Swiss, 54@55c. Philadelphia cream $1.60 per dozen.

Eggs.—Fresh select, 70@72c. Candled storage 55@57c. Storage, 52@53c.

Potatoes.—Round, $4@4.50 per 150 lb. sack. Onions, $4.50@6 sack. Cabbage, $1@1.25 bushel. Lettuce, New York, $2.50@3 box. Sweet potatoes, $4@4.25 barrel. Cauliflower, $3@3.25 bushel. Turnips, $1.75@2 bu. Celery, 35@50c dozen. Beans, wax and green, $3@3.25 bushel. Squash, 90c@$1 bushel. Beets, new, 20@30c doz.

Fruit.—Apples, $1.50@2.50 bushel. Quinces, $2.25@2.75 bushel. Grapes New York state 4-quart basket, 38@40c. Chestnuts, 15c pound.

PHILADELPHIA LIVE STOCK

Philadelphia, Pa., Nov. 17, 1919.

Receipts of live stock for week ending November 15 were as follows:

	Beef Cattle	Sheep and Lambs	Hogs
Total for Week	2,180	8,545	9,693
Previous Week	2,510	6,010	6,895

Calves.—Receipts of calves last week were 1,077 head against 1,303 head week previous.

Beef Cattle.—Steers and cows were firm and higher, with demand absorbing the limited offerings of fine stock. Calves were steadily held. Steers, good to choice, $15.50@17; do., fair to good, $13.50@15.50; common to fair, $12@13.50; cows, fat, per pound, good to choice, corn fed, 9½@11c; fair to good, 7½@9½c; do., common to fair, 4½@7½c; calves, extra choice, $20@21; fair to good, $18@20; common, $12.50@16.50; heavy, $8.50@12.50; Tennessee, choice, $16@17.50; other southern, $9@13.

Sheep and ambs.—There was a fair outlet for the offerings of desirable stock and values generally were steadily maintained. Sheared sheep, wethers, extra, $10.50@11; good to choice, $9@10; medium, $7@8; common $3.50@5; ewes, fat, heavy, $7.50@8; spring lambs, choice, $14.50@15; medium, $12@13.50; culls and common, $10@11.50.

Hogs.—Trade was quiet and the market was easier under freer offerings. Quotations for best western, $17; nearby, good, $15@15.50.

City Dressed Stock.—Veal was in fair request and steady. Steers, heifers and cows ruled firm and higher. Mutton sold slowly and prices were easier. Hogs were steadily held, with demand fair. Quotations: Steers, 20@26c; heifers, 15@20c; cows, 13@18c; calves, city dressed, choice, 22@26c; country dressed, 20@24c; sheep, 12@18c; lambs spring, 22@25c; hogs, 22½c.

LIVESTOCK

Lancaster, Pa., Nov. 17, 1919.

Cattle.—Receipts, 6309, against 4863 head last Monday; market draggy; prices steady; many unsold at close of trading; good to choice steers, $15@16; fair to good steers, $13.50@14.75; common to medium steers, $11@13; good to choice heifers $11.25@12.50; fair to good heifers, $9.75@11; common to medium heifers, $8.25@$9.50; good to choice cows, $9.50@11; fair to good heifers, $8@$9.25; common to medium heifers $6@$7.50; good to choice butchers' bulls, $10@12; fair to good bulls, $8.50@9.75; common to medium bulls, $7@8.25; good stockers, $8@$9; common to fair stockers, $7@8; good feeders, $11.50@13.25 fair to good, $9@10.50; common to medium $7.75@8.75; good calves, $19@20; common to medium, $15@18. Hogs—Receipts, 960 head; market fairly active; prices steady; good to prime, $15@18; light to medium, $14.75@14.18; roughs, $13@14; stags to sows, $12@13.

Chicago, Nov. 17, 1919.

Hogs.—Receipts, 34,000; estimated tomorrow, 75,00; firm, 25@35c higher; top, $14.85; bulk, $14.40@14.80; heavy, $14.35@14.80; medium, $14.40@14.85; light, $14.45@14.80; light lights, $14.35@14.75; heavy packing sows, smooth, $13.25@13.65; packing sows rough, $13.50@13.65; pigs, $14.35@15. Cattle—Receipts, 34,000; estimated tomorrow, 27,000; weak; beef steers, medium and heavyweight, choice and prime, $18.40@20.50; medium and good, $11@18.40; common, $8.75@11.25; lightweight, good and choice, $14.50@20; common and medium, $8@14.50; butcher cattle, heifers, $6.85@15; cows, $6.75@13.50; canners and cutters, $5.60@6; veal calves, $18@19; stocker steers, $6.25@10.25; western range steers, $7.50@15.25; cows and heifers $6.50@12.75. Sheep—Receipts, 37,000; estimated tomorrow, 37,000; weak; lambs, $12.25@14.85; culls and common, $8.50@12; ewes, medium, good and choice, $6.85@8.35; culls and common, $3@6.75; breeding, $6.50@11.75.

PHILADELPHIA HAY AND GRAIN

Philadelphia, Nov. 17, 1919.

Baled Hay and Straw.—Receipts, 120 tons of hay. Market firm. Timothy hay, No. 1, $33; do. No. 2, $29@31; do. No. 3, $25@28. Clover-mixed hay, light mixed, $29@31; do. No. 1 mixed, $27@28. Straw—No. 1 straight rye, $15@15.50; do. No. 2, $13@13.50; do. No. 1 tangled rye, $14; do. No. 2, $12.50@13; do. No. 1, wheat straw, $13.50@14; do., No. 2, $12.50@13; do., No. 1, oat straw, $14.50@15; do., No. 2, $12.50@13.

Bran.—Quiet but steady. We quote: Car lots, to arrive, including sacks. Soft winter bran, western, in 100-lb. Sacks, per ton, $45.50@46.50; spring bran, in 100-lb. sacks, per ton, $44.50@45.50.

Corn.—No. 2, yellow, $1.68@1.69.

Oats.—No. 2, white, 82@82½c; No. 3, 81@81½c.

NEW YORK HAY AND GRAIN

New York, Nov. 17, 1919.

FEED.—The market for mill feed assumed a waiting position toward the close of last week, with buyers and sellers apart. Offers were not particularly heavy and holders were not inclined to make concessions, while, at the same time, buyers were indifferent about making purchases.

Quotations: City feed, bran, $45; middlings, $54, in 100-pound sacks; red dog, $69, nominal, in 100-pound sacks; Western spring bran, $44@44.50; standard middling, $50; flour middlings, $59; red dog, $69, all in 100-pound sacks, 30-day shipment. Oat feed, $28.50; rye middlings, $52; white hominy feed, nominal, all in 100-pound sacks. Cottonseed oil meal, $79; linseed oil meal, $80, in 100-pound sacks.

Hay and Straw.—Offerings are rather light at most harbor points, trade fair and market holds steady at generally unchanged prices. Probably the firmest spot in the market is the Bushwick station of Long Island Railroad, where supplies are short, and it is possible that our quotations might be exceeded there for occasional hang-up cars. Rye straw slow and easy at generally $14, only rarely higher. Oat straw about steady.

Hay.—No. 1 large bales, $35 ton. No. 2, $32@34 ton; No. 3, $29@32; shipping, $27@29 ton. Fancy light clover mixed, $33 ton. Clover, No. 1, mixed, $31@32.

Straw.—Per ton, No. 1 rye, $14@15; No. 1, oat, $15.

Wheat.—No. 2 red, $2.37½; No. 2 hard winter, $2.37½.

Corn.—No. 2 yellow, $1.71¼; No. 3 yellow, $1.70¾.

Oats.—No. 2 white, 82c; No. 3 white, 81½c.

Rye.—Export, $1.51½.

Buckwheat.—Milling, $2.95@3 per 100-pounds.

PITTSBURGH HAY AND GRAIN

Pittsburgh, Pa., Nov. 17, 1919.

Hay.—No. 1 timothy, $29@30; No. 2, $27.50@28; No. 3, $25@26; No. 1 light mixed, $28@29; No. 1 clover mixed, $30@30.50. New No. 2 clover mixed, $25@28.

Straw.—Receipts of straw very light, only a few cars arrived during week. Buyers are active in securing winter supplies. Market advancing.

No. 1 oat, $12.25@12.75; No. 2, $12@12.50; No. 1 wheat, $12.25@12.75; No. 2, $11.75@12.25; No. 1 rye, $13@13.50; No. 2, $12.50@13.

Ear Corn.—Receipts and demand are both light, not much trading, buyers anticipating lower market. New No. 2 ear corn offered at $1.30 per bushel.

Oats.—Oats somewhat easier in sympathy with western markets, altho receipts are light. Market quiet. No. 1 white, 78c. No. 2, 77@77¾c; No. 3, white, 76@77c.

PHILADELPHIA DAIRY MARKET

Philadelphia, Nov. 17, 1919.

Butter.—Receipts, 1006 tubs. The market was quiet and without important change. The Produce Exchange was closed, and there was little wholesale trading on the street. Fresh, solid-packed creamery, fancy, high-scoring goods, 72@74c, the latter for jobbing sales; extra, 71c; extra firsts, 65@68c; firsts, 59@62c; seconds, 56@57c; thirds, 52@55c; sweet creamery, choice and fancy, 73@75; do., fair to good, 60@70c; ladle-packed, as to quality, 49@51c; packing stock, 46@48c.; fancy brands of nearby prints jobbing at 77@79c; good to choice, 66@76c, fair, 61@64c.

Cheese.—Firmly held. Quotations were as follows: New York whole-milk flats, fancy, 33@33¼c; fair to good, 31½@32½c; Wisconsin, whole-milk flats, fancy, 33@33½c; fair to good, 31@32c; jobbing sales of fancy goods, 34@35c.

NEW YORK MILK MARKET

New York City, Nov. 17, 1919.

Some of the upstate cheese factories have closed down for the season which effects the supply here, and with rather poor demand the market is reported very flush although not enough to start the manufacturing plants. The rate for November for 3 percent. milk in 200-mile zone is $3.33 per 100 lbs.; add 4c per 100 lbs. for each additional one-tenth of one percent butterfat. Receipts of milk and cream in 40-quart cans for the week ending November 15, 1919 were as follows:

Railroad	Milk	Cream
Erie	44,414	3,223
Susquehanna	7,238	112
West Shore	13,942	1,714
Lackawanna	57,866	1,807
N. Y. Central (long haul)	137,394	2,017
Ontario	46,110	1,743
Lehigh Valley	45,389	696
New Haven	5,894	48
Pennsylvania	12,133	440
Other Sources	6,000	200
Totals	376,380	12,000
Same week last year	349,088	10,142

TOBACCO MARKET

The market situation was characterized by more activity than at any previous time this year; in fact it seems that nearly all the large buyers are in the field bent on replenishing their more or less depleted factory stock. Much Havana tobacco has been contracted at $25@30 per cwt. and broadleaf has sold as high as $20@26 per crop lots; however, prevailing prices upon the latter were around $15@16 per cwt. tho including both wrappers and binders. Judging by present market movement, the bulk of the crop will soon pass from the growers and at fairly satisfactory price, but it would seem that those who choose to hold until a later time may not do so in vain. The local crop is short, very short, as shown by the greatly reduced acreage, the great damage by hail and in some places excessive rain, which resulted in the "drowning" of many acres in low areas. It has been estimated that the yield per acre will be 300 pounds less than last year, and that the total product of the locality will not exceed 60 per cent of that of 1918. Continued damp weather has been unfavorable to the curing of late cut tobacco resulting in some instances in moldy tips and darkened color, but the damage was not serious or extensive and should not be accepted as a basis of lower prices. Past experience shows that such a condition has not permanently lowered the valuation of tobacco thus affected and that with the coming of cold weather aided by careful handling no loss has resulted.

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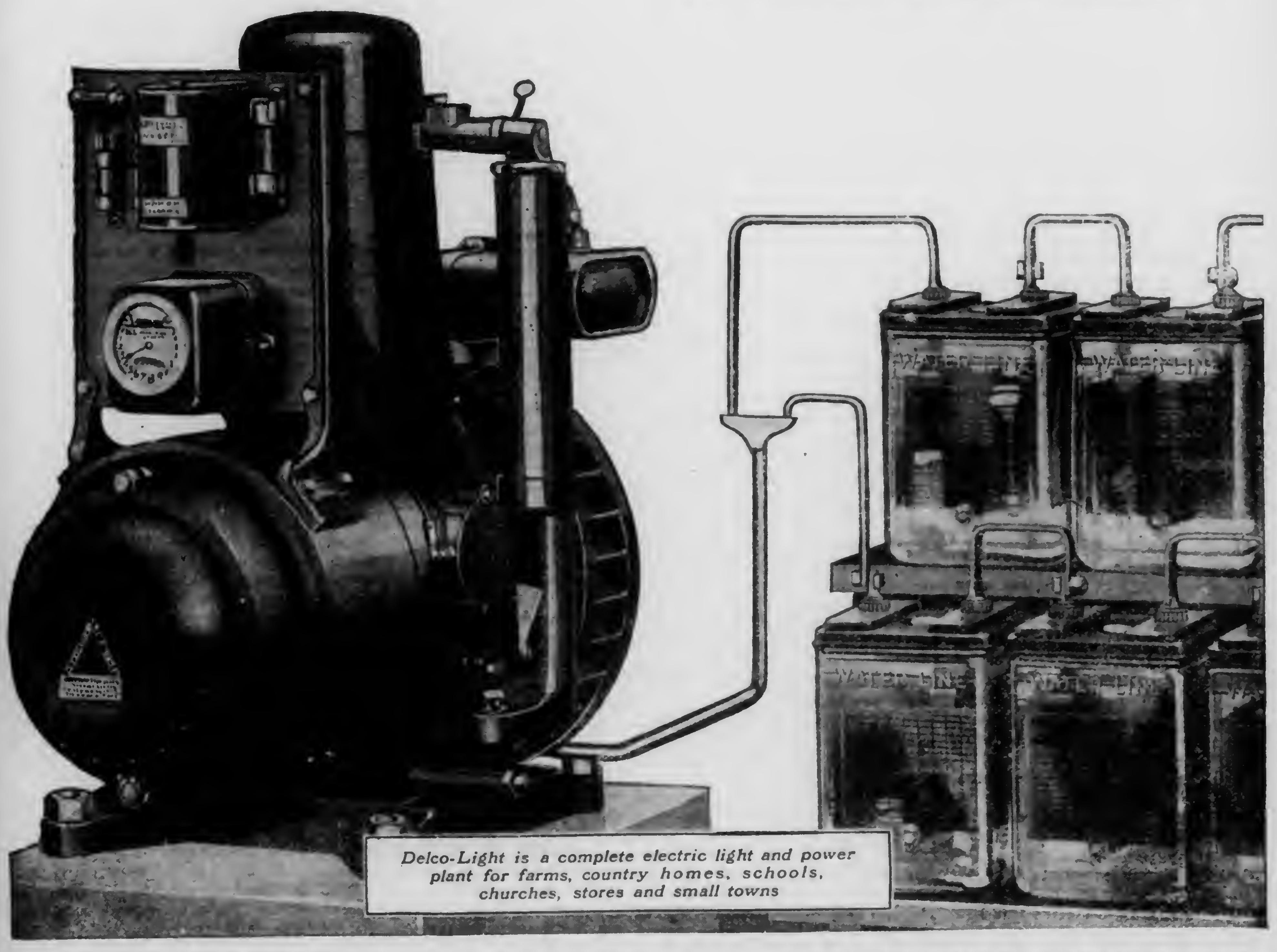

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KEZIAH COFFIN

By JOSEPH C. LINCOLN

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SYNOPSIS

Keziah Coffin, a good-natured widow, is packing up to leave the fishing village to go to Boston, her brother having died and left her alone. Grace Von Horne, ward of Eben Hammond and young friend of Keziah, is assisting her. They are discussing the coming of the new minister for the "Regular" Church, to which denomination Keziah belongs. Grace is a member of the "Come-Outers," a rival sect. Between the two a jealous rivalry exists. Eben Hammond calls and induces Keziah to become housekeeper for the new and single minister. She accepts and Grace goes with her to prepare the house for his coming. The new minister arrives and he and Keziah become friends at once. Keziah proceeds to make him acquainted with local conditions—especially the strained relations between the two sects. Mrs. Coffin advises him that if he wishes to steer an easy course he must recognize the "classes" of the community, and also not to fraternize with the "Come-Outers." In spite of the warning he visits the "Come-Outer" meeting one evening, is recognized and is preached at and prayed for. Grace Van Horne and the Minister meet after the meeting in a rainstorm and he sees her home. The "Packet" arrives in port, bearing Nat, the girlhood lover of Keziah.

The minister walked up the dusty lane, lifted the Pepper gate and swung it back on its one hinge, shooed away the three or four languid and discouraged-looking fowls that were taking a sun bath on the clamshell walk, and knocked at the front door. No one coming in answer to the knock, he tried again. Then he discovered a rusty bell pull and gave it a sharp tug. The knob came off in his hand and he hurriedly thrust it back again into its place. Evidently, that bell was solely for ornament.

He came to the conclusion that no one was at home and felt a guilty sense of relief in consequence. But his conscince would not let him depart without another try, so he clenched his fist and gave the cracked door panel a series of tremendous thumps. A thin black cat, which had evidently been asleep beneath the step, burst from its concealment and fled in frantic terror. Then from somewhere in the rear of the house came the sound of a human voice.

"Hi!" it called faintly. "Whoever you be, don't bust that door down. Come round here."

Ellery walked around the corner of the building. The voice came again.

"Say!' it wailed, "why don't you answer? Be you comin'? If you're a peddler, you needn't."

"I'm not a peddler," was the minister's amused reply.

"Oh, ain't ye? All right. Come along, then."

Ellery "came along" as far as the angle where the ell joined the main body of the house. So far as he could see every door and window was closed and there were no signs of life. However, he stepped to the door, a green-painted affair of boards, and ventured another knock.

"Don't start that poundin' again!" protested the voice. "Come round to t'other side where I be."

So around went the Reverend John, smiling broadly. But even on "t'other side" there was no one to be seen. And no door, for that matter.

"Why!" exclaimed the voice, "if 'tain't Mr. Ellery! How d'ye do? Glad to see you, Mr. Ellery. Fine day, ain't it. Here I be at this window."

Sure enough; one of the windows on this side of the house was raised about six inches at the bottom, the shade was up, and peering beneath the sash the minister discerned the expressive features of Abishai Pepper—or as much of those features as the size of the opening permitted to be seen.

"Oh!" exclaimed the visitor, "is that you, Mr. Pepper? Well, I'm glad to see you, at last. You are rather hard to see, even now."

Kyan was plainly embarrassed. He stammered as he answered.

"Yes," he agreed, "I—I shouldn't wonder if I be. How be you? Pretty smart?"

"Yes, thank you. I'm well."

"Er—er—come to call, did you?"

"Why, yes, that was my intention."

'Hum! Er—er—Laviny, she's gone over to Thankful Payne's. She heard that Thankful's cousin up to Middleboro had died—passed away, I mean—that she thought she'd run over and find out if Thankful was willed anything. She said she'd be back pretty soon."

"Very well. Then, as she won't be gone long, perhaps I'll come in and wait."

He was moving away toward the corner when a shout from beneath the window sash brough him to a halt.

"Hi!" called Abishai. "Hi, Mr. Ellery! don't go to that door. 'Tain't no use; it's locked."

"Locked? Well, you can unlock it, can't you?"

"No, not very well. That is, I—Mr. Ellery, come back here, won't ye? I don't want anybody to hear."

The house of the nearest neighbor being several hundreds yards away, the likelihood of being overheard was improbable; but the minister came back, nevertheless.

"You see, Mr. Ellery," stammered Kyan, "I—I'd like to have you come in fust rate, but—er—Laviny she's got the key."

Ellery was surprised.

"She has!" he exclaimed.

"Um—hm, she's got it. She took it with her."

"But there are other doors. She didn't take them all, did she?"

"No—o, but— Well, the fact is, Mr. Ellery, I—I—I'm locked in."

"Locked in?"

"Yes, locked in this room. She—she— Oh, consarn it all, Mr. Ellery, she's locked me in this room a-purpose, so's I won't get out and go somewheres without her knowin' it."

"What?"

"Um—h'm; that's what she's done. Did you ever hear of anything like that in your born days?"

This surprising disclosure was funny enough, but the tone of grieved indignation in which Mr. Pepper told of his imprisonment was funnier still. The minister coughed violently and looked the other way.

"She done it a-purpose," continued Kyan, in a burst of confidence. "She had me put one of them new-fangled spring locks on the door of this room t'other day, 'cause she said she was afraid of tramps and wanted some place to shut herself up in if one of 'em come. And—and after dinner to-day she sent me in here for somethin' and then slammed the door on me. Said she cal'lated I'd stay put till she got back from Thankful's She knew mighty well I couldn't get out of the window, 'cause it won't open no further'n 'tis now. I wa'n't never so provoked in my life. 'Tain't no way to treat your own brother, lockin' him up like a young one; now, is it?"

Ellery's reply was not made immediately. He had heard numerous stories concerning this odd household, some of which seemed too absurd for belief. But this performance was more ridiculous than anything he had heard.

"'Tain't right, is it, Mr. Ellery?" demanded Kyan.

"Why," answered the caller chokingly, "I—I—it is rather unusual, that's a fact. May I ask what you have done to———"

"Done? I ain't done nothin'. She's so darned scared some other woman'll get my money that—you see, a month or so ago I—I—well, she thought I done somethin', or was plannin' to do somethin' that—Keziah Coffin never told you anything about me, did she?"

"No, indeed. What could Mrs. Coffin tell me about you?"

"All right. Nothin', nothin'. Only if she did, 'tain't so. But I ain't goin' to stand it no more, Mr. Ellery. Bein' shut up in a darned old—excuse my swearin', I didn't mean to, tho I got reason enough, land knows—bein' shut up in a room full of trunks and odds and ends is goin' too fur. I never want to smell old clothes ag'in long's I live. Would you stand it if you was me, Mr. Ellery?"

"Why, of course I mustn't interfere in your family matters, Mr. Pepper. Perhaps I'd better call some other time. Good afternoon."

"Hold on! hold on! you ain't answered me yet. You're a minister and I go to your meetin' house. Tell me what you'd do if you was me. Would you stand it?"

Ellery laughed aloud.

"No,' he said, "I suppose I should not."

"I bet you wouldn't! What would you do?"

"I don't know. You're of age, Mr. Pepper, and you must decide for yourself. I think I should declare my independence. Really, I must go. I———"

"Don't be in such a hurry. I want advice. I need it. And, so fur's declarin' goes, that don't do me no good. She can declare more things in a minute than I can think of in a week. Tongue! I never heard—No, no! Never mind the declarin'. What would you do? S'posin' you wanted to go outdoor without havin' her tagged to your coat tails, how'd you stop the taggin'?"

The absurdity of the affair was too much for the visitor. He roared a "Ha, ha!" that caused Abishai to wave a warning hand beneath the sash.

"Ss-h-h! sshh!" he hissed. "Folks 'll hear ye, and I'd be so ashamed if they did that I wouldn't dast to show my head. Can't show much of it, anyhow, just now. By gum! I'll do somethin' desperate. I—I dunno as I won't pizen her. I———"

"Hush! hush! you mustn't talk that way. I'm afraid you must be very fascinating, Mr. Pepper. If your sister is so very fearful of your meeting other women, it must be because she has good reason to fear."

"Stop your foolishness! Oh!—I—I ask your pardon, Mr. Ellery. That ain't no way to talk to a minister. But I'm goin' to go out when I want to if I bust a hole thru the clapboards. I ain't fascinatin'. You ask any woman—except her—if I be, and see what they say. What'll I do?"

"Ha, ha! I don't know, I'm sure. You might lock her up, I suppose, just for a change.

"Hey!" There was a sound from behind the pane as if the imprisoned one had slapped his knee. "By gum! I never thought of that. Would you now, Mr. Ellery? Would you? Sshh! sshh! somebody's comin'. Maybe it's her. Run around to the door, Mr. Ellery, quick. And don't tell her I've seen you, for mercy sakes! Don't now, will ye? Please! Run!"

The minister did not run, but he walked briskly around the corner. Sure enough, Lavinia was there, just unlocking the door. She expressed herself as very glad to see the caller, ushered him into the sitting room and disappeared, returning in another moment with her brother, whom she unblushingly said had been taking a nap. Abishai did not contradict her; instead, he merely looked apprehensively at the minister.

The call was a short one. Lavinia did seven eighths of the talking and Ellery the rest. Kyan was silent. When the visit was over, Miss Pepper escorted her guest to the door and bade him a voluble good-by. Over her shoulder the minister saw Kyan making frantic signs to him; he interpretted he signals as a request for secrecy concerning the interview by the window.

Several times during the remainder of that week he surprised his housekeeper by suddenly laughing aloud when there was, apparently, nothing to laugh at. He explained these outbursts by saying that he had thought of something funny. Keziah suggested that it must be mighty funny to make him laugh in the middle of sermon writing.

"I've heard sermons that were funny," she said, "tho they wasn't intended to be; but what I've heard of yours ain't that kind. I wish you'd let me in on the joke. I haven't been feelin' like laughin' for the last fortni't."

She had been rather grave and preoccupied, for her, of late. Bustling and busy she always was, never sitting down to "rest," as she called it, without a lap full of sewing. The minister's clothes were mended and his socks darned as they had not been since his mother's day. And with him, at meal times, or after supper in the sitting room, she was always cheerful and good-humored. But he had heard her sigh at her work, and once, when she thought herself unobserved, he saw her wipe her eyes with her apron.

"No, no," she protested, when he asked if anything had gone wrong. "I'm all right. Got a little cold or somethin', I guess, that's all."

She would not give any other explanation and absolutely refused to see the doctor. Ellery did not press the matter. He believed the "cold" to be but an excuse and wondered what the real trouble might be. It seemed to him to date from the evening of his chapel experience.

He told no one, not even her, of Kyan's confidential disclosure, and, after some speculation as to whether or not there might be a sequel, put the whole ludicrous affair out of his mind. He worked hard in his study and at his pastoral duties, and was conscious of a pleasant feeling that he was gaining his people's confidence and esteem.

A week from the following Sunday he dined in state at the Daniels's table. Captain Elkanah was gracious and condescending. Annabel was more than that. She was dressed in her newst gown and was so very gushing and affable that the minister left rather embarrassed.

When, after the meal was over, Captain Elkanah excused himself and went upstairs for his Sabbath nap, the embarrassment redoubled. Miss Annabel spoke very confidentially of her loneliness, without "congenial society" of how very much she did enjoy Mr. Ellery's intellectual sermons, and especially what a treat it had been to have him as a guest.

"You must dine here every Sunday," she said. "It will be no trouble at all, and if you say no, I shall feel that it is because you don't want to see me—father and me, of course, I mean."

The minister didn't accept this pressing invitation; on the other hand, he could not refuse it absolutely. He did not like Miss Daniels overmuch, but she was the daughter of his leading parishioner and she and her parent did seem to like him. So he dodged the issue and said she was very kind.

He left the big house as soon as he could without giving offense, and started back toward the parsonage. But the afternoon was so fine and the early summer air so delightful that he changed his mind and, jumping the fence at the foot of Cannon Hill, set off across the fields toward the bluffs and the bay shore.

Thinking of the Hammond family reminded him of another member of it. Not that he needed to be reminded; he had thought of her often enough since she ran away from him in the rain that night. And the picture in the doorway was not one that he could forget—or wanted to. If she were not a Come-Outer, he could meet her occasionally and they might become friends. She was a disconcerting young person, who lacked proper respect for one of his profession and laughed when she shouldn't—but she was interesting, he admitted that.

And then he saw her. She was standing just at the outer edge of the grove, leaning against a tree and looking toward the sunset. She wore a simple white dress and her hat hung upon her shoulders by its ribbons. The rosy light edged the white gown with pink and the fringes of her dark hair were crinkly lines of fire. Her face was grave, almost sad.

John Ellery stood still, with one foot uplifted for a step. The girl looked out over the water and he looked at her. Then a crow, one or several whirling above the pines, spied the intruder and screamed a warning. The minister was startled and stepped back. A dead limb beneath his foot cracked sharply. Grace turned and saw him.

"Oh!" she cried. "Who is it?"

Ellery emerged from the shadow.

"Don't be frightened, Miss Van Horne," he said. "It is—er—I."

This statement was neither brilliant nor original; even as an identification it lacked considerable.

"I?" repeated the girl. "Who? Oh! Why———"

The minister came forward.

"Good afternoon, Miss Van Horne," he stammered. "I'm afraid I frightened you."

She was looking at him with a queer expression, almost as if she scarcely believed him real.

'I hope—" he began again. She interrupted him.

"No," she said confusedly, "you didn't frighten me. I was a little startled when I saw you there behind me. It seemed so odd, because I was just thinking—No, I wasn't frightened. What is there to be frightened of—in Trumet?"

"No much, that's a fact," he said, in answer to her question. He would have liked to ask what she had been thinking that made his sudden appearance seem so odd.

"You came to see the sunset, I suppose?" she said hurriedly, as if to head off a question. "So did I. It is a beautiful evening for a walk, isn't it?"

She had said precisely the same thing on that other evening, when they stood in the middle of "Hammond's Turn-off" in the driving rain. He remembered it, and so, evidently, did she, for she colored slightly and smiled.

"I mean it this time," she said. "I'm glad you didn't get cold from your wetting the other day."

"Oh! I wasn't very wet. You wouldn't let me lend you the umbrella, so I had that to protect me on the way home."

"Not then; I meant the other morning when Nat—Cap'n Hammond—met you out on the flats. He said you were wading the main channel and it was over your boots."

"Over my boots! Is that all he said? Over my head would be the plain truth. To cross it I should have had to swim and, if what I've heard since is true, I doubt if I could swim that channel. Captain Hammond helped me out of a bad scrape."

"Oh, no! I guess not. He said you were cruising without a pilot and he towed you into port; that's the way he expressed it."

"It was worse than that, a good deal worse. It might have been my last cruise. I'm pretty certain that I owe the captain my life."

She looked at him uncomprehendingly.

"Your life?" she repeated.

"I believe it. That part of the channel I proposed swimming was exactly where two men have been drowned, so people say. I'm not a very strong swimmer, and they were. So, you see."

Grace cried out in astonishment.

"Oh!" she exclaimed. Then pointing toward the bay, she asked: "Out there, by the end of that leader, was it?"

'Yes, that was it."

She drew a long breath. Then, after a moment:

"And Nat spoke as if it was all a joke," she said.

"No doubt he did. From what I hear of your brother, he generally refers to his own plucky, capable actions as jokes. Other people call them something else.

"Your brother———" went on the minister.

"He isn't my brother," she interrupted absently. "I wish he was."

She sighed as she uttered the last sentence.

"No, of course he isn't your real brother; I forgot. But he must seem like one."

"Yes," rather doubtfully.

"You must be proud of him."

"I am." There was nothing doubtful this time.

"Well, he saved me from drowning. I'm almost certain of that."

"I'm so glad."

She seemed to mean it. He looked at her.

"Thank you," he said drily. "I'm rather glad myself."

"Oh! I didn't mean it exactly that way. Of course I'm glad you weren't drowned, but I'm especially glad that—that one of our family saved you. Now you won't believe that Come-Outers are all bad."

"I never believed it."

She shook her head.

(Continued Next Week.)

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74

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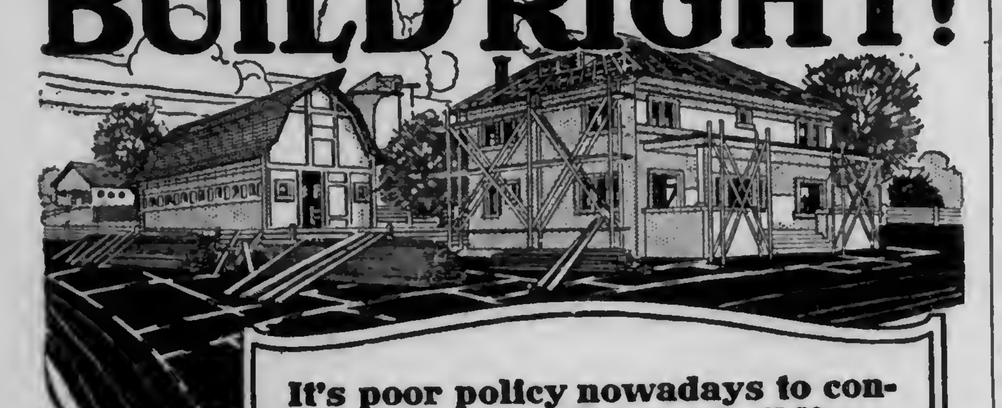

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WINTERING THE BEES

Strong colonies with young queens can be depended upon to go thru any winter out of doors if they have sufficient stores and are properly protected. There should be thirty pounds of honey in every ten-frame hive. That means that six frames should be pretty well filled. It is better to examine the frames than to weigh the hives because old frames are certain to be heavier than those which have been used only a season or two, as more wax will have been stuck onto them. It is best to have all the honey in the center of the hive where the bees cluster.

The average farmer as well as most fruit growers winter their bees in the open. This can be done safely if ten-frame hives are used. Eight frame hives are too small unless the double walled kind is used. Much depends upon the location. Bees are bound to suffer, no matter how well packed, if the hives are exposed to high winds. The best place for them is the southerly side of a wall or building, unless their is a grove of trees to break the wind.

A good way to insulate a ten-frame hive against the cold is to substitute dummy frames filled with chaff for the two outside frames, thus confining the bees to eight frames and keeping them away from the walls. Then the hive may be wrapped in building paper tied in place with cord, or a light board frame may be built around it and the space between the hive and the frame filled with leaves, straw, planer shavings, or pine needles. Of course the opening must not be covered. Amateurs often make this opening too small. The bees need fresh air. Cold is not so detrimental as dampness. Openings three-eights of an inch high are best. They may be contracted lengthwise as seems desirable, preferably to five or six inches.

, Mr. J. P. Coburn, of Massachusetts has devised a rather easy way of packing his hives for winter. He has an outside case which goes over the hive, with about two inches to spare. At the bottom on each side a light detachable board is arranged to cover the opening. The space between the two walls is filled with chaff, sawdust, or some other insulating material. When spring comes a box with a handle is placed at the bottom of the outside hive and the boards removed, allowing the packing material to drop into the receptacle.

Many times, tho, the bees are nicely wintered in hives, the bodies of which are simply protected by water proof black paper folded around the sides and held in place by strips of lath tacked along the edges. Extra protection is given by putting newspaper inside the heavier paper.

Probably the most important point about protecting bees for winter is to have them well covered. In actual practice there is no better way than to put on a super, over the bottom of which a square of burlap has been tacked. This burlap should be loose, so that there will be room for two or more plates of candy underneath it. After being put on the hive the super should be filled with some absorbent material. Planer shavings are about the best, but pine needles, leaves or hay may be used. A tight cover, preferably a telescope cover, should be over the top. Much moisture is thrown off by the bees, and if it can escape and be absorbed above the cluster, the hive will be much drier than when a tight board covering is placed on the hive body.

In the Middle States it is a common plan to put on a cover early in the fall and to allow the bees to make it tight. This is called sealing up the hive. It is not a practice which gives satisfaction near the coast, or where much dampness is found. In such a situation it is much better to pack the bees for winter just as described above.

Bees can endure a great amount of dry cold if the cluster is large, but the colder the hive gets, the more stores they will consume. The bees become very active when they begin to feel the cold, and commence to drive their wings at great speed, thus creating a current of warm air in the hive. The more energetically they carry on this fanning, however, the more they eat. Obviously, therefore, it is economy to make the hive snug in order that the bees may be kept as near dormant as possible.

The more honey that is left in spring the quicker the bees will get to work. It is when brood rearing commences after the weather begins to get warm that the stores disappear fastest.

Out-door wintering is especially advised for amateurs. The bees are likely to come thru the winter much better than in the cellar. Neither is the practice of putting the bees in sheds and packing hay or other material around them to be recommended. The hives are likely to become damp, and dampness is more fatal to bees than dry cold. They are better off on their summer stands if protected from the wind in some way, even by the erection of a tight board fence.

Making bees snug for winter is more than a matter of economy this year. The more honey that can be produced, the less sugar will be required. Moreover, no effort must be spared to get the bees back to normal numbers.

INCREASING DAIRY PRODUCTION

I made the statement in Washington when the question of increasing the dairy products was before the Government, that the dairy products could be increased 20 percent in sixty days any time if it was worth while and profitable, by increased feeding of the animals, and I believe it now, but this can only be done with animals that can profitably turn the food into dairy products, and it is only without utter disregard to cost of production that you can feed scrubs the present high priced grains. I am convinced, and I have seen evidence of it time after time, that you can take the average scrub herd and increase the production more than 50 percent in two generations and do it on the same feed that the scrubs had. This is not strange when you stop to think about it. It is simply increasing the production by more efficient machinery and these cows are simply milking machines. What worries me is that so many thousands of our farmers will waste their time and effort in inefficient machinery for doing their work.—D. D. Aitken.

Among the insects that threaten the peach industry of Delaware is the Oriental Peach Moth. During 1918 two men who nearly covered Delaware in search of the Oriental Peach Moth, found some injury that might have been caused by this insect, altho the insect itself was not found. During the past season the northern end of the state was again inspected by graduates of Delaware College, who found some suspicious injury but failed to find the insect.

COUNTY NOTES

Cumberland County, Shiloh, N. J., Oct. 29.—Corn is being husked and some growers are paying as high as 8 and 10 cents per bushel for having it husked. If a tenant farmer, that is the same as 16 or 20 cents a bushel for the tenant pays for the husking of the landlord's share. Then it takes two bushels of ears to make one of shelled corn. Thus it costs the tenant 40 cents on every bushel of his corn to pay for the husking alone. Some city folks may think it does not cost much to raise a crop. We have had no killing frost. Many people cannot find enough apples to eat, or for a dish of sauce, or a pie. It is the first year in my remembrance there were not apples, and apples to spare. Cider is 40 cents a gallon; apples, $4 a hamper. Men who have been in the habit of placing 40 baskets in cold storage have not four baskets this season. Keiffer pears are bringing 90 cents a basket in the orchard.

Many many piggeries have lost their inmates. Sweet potatoes, firsts, $1.50; seconds, 90 cents.—C. J. S.

McKean Co., Pa., (NC) Bradford R. D. 1., Oct. 27.—No killing frost until last week in September. Much rains all fall. Cows doing well owing to late pasture. Apples very scarce; potatoes yielding well but rotting bad. Price, $7 and $8 per bbl. Potatoes, $1.50 bu.; eggs, 75 cents; butter, 75c. Very little plowing done. Rainy weather retarding outside work. No threshing done in this township yet.—R. C. Fuller.

Binghamton, N. Y., Nov. 11.—Heavy rains and winds are making very disagreeable weather nowadays. Quite a few potatoes are still in the ground. November 10th the thermometer stood at 18 degrees above zero, but today it is above freezing. Winter wheat is looking good. The Public Market at Johnson City is a big success. Thusday October 23, eggs sold there at $1.15 per dozen, owing to the New York strike; they are now 80 cents per dozen. Apples are very scarce and bring most any price. 75 cents per bushel is being offered for cider apples. Butter is 70 cents per pound. The price for November milk remains the same as October. The trapping season has opened and trappers are thicker than ever before owing to the high prices for furs. Feed has gone up again. Home grown peanuts were one of the new offerings at the Johnson City Market recently.—C. H.

Cumberland County, Pa., (S) Nov. 3.—Weather warm with rain most every day for last two weeks. Corn a good crop, mostly cut. A lot of soft corn. Fall grain looking good with a large acreage. A large crop of apples in this section but are not keeping. Potatoes a fair crop selling around $1.50 per bushel. Apples, $1,25 per bushel. Cabbage plentiful selling around 2½ cents per pound, plenty of pasture. Young grass in wheat coming nicely. Farmers are well supplied with live stock of all kinds. Quite a few sales, but are not going as good as they did during the spring and summer. Lots of farms changing owners and some large profits realized on farms that were sold a year or two ago. Wheat, $2.15 per bushel; rye, $1.35 per bushel; oats, 65 cents per bushel; corn, $2 per bushel. Butter, 48 to 50 cents. Eggs, 65 cents. Lard, 25 cents.—M. H. Warner.

DELAWARE STATE CORN SHOW

The 13th Annual State Corn Show will be held in Dover, December 16th to 18th, under the auspices of the Delaware Corn Growers' Association. Plans are being made to make this the most interesting and instructive exhibition yet held by the Association. In addition to several hundred dollars in prizes which will be offered for the best samples of corn and small grain exhibited by farmers of the state, the Association opens one class to the world at large. Any corn grower of the United States is eligible to enter this class without entry fee. Premiums will be given for the 10 ears of corn shelling the most grain by weight. These will be judged on weight of grain alone and not by score card points. First prize, $10 gold; second prize, $5; third prize, $3. Applications for entry should be made to A. R. Grantham, Secretary, Newark, Delaware, before December 10th, 1919.

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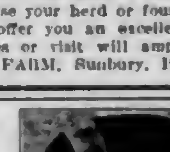

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2 to 3 months old for feeders.
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Conducted by W. C. Fair, V. S.

Advice thru this department is free to our subscribers. Each communication should state history and symptoms of the case in full; also the name and address of writer. Initials only will be published. We cannot make reply by mail. This is one of the most valuable columns of the paper and we invite readers to make use of it. Clippings from this column, when properly preserved and classified, make one of the most valuable medical symposiums a farmer-stockman can obtain.

Bruised Stifle.—About a week or ten days ago my horse slipped on cement floor and fell, he bruised and slightly cut stifle joint. Since the accident he holds up foot and is seemingly in considerable pain. What had I better apply? M. Y., Waymart, Pa.—Besides being badly bruised, you have an infected wound. Wash the parts with soap and water, then paint the sore and bruised parts with tincture of iodine one part and two parts glycerine every day or two. Dissolve ¼ lb. acetate of lead in one gallon of cold water and wet bruised parts 3 times a day. The stifle joint of horse corresponds closely to the knee of man, therefore you can readily understand it should have close attention, for if neglected the joint may be left stiffened for life. After the wound is healed, gentle hand rubbing will have good effect.

Sprained Hock.—We have a four-year-old draft horse that slipped while hauling load up a hill, since then his knee joint on right hind leg has been hot and swollen and he travels some lame. Have examined him closely, find no other part of leg which is seemingly tender. J. H. A., Meadville, Pa.—If the joint is very hot and tender, foment it with warm water 3 times a day, 20 or 30 minutes each time, then apply one part turpentine, one part aqua ammonia and 3 parts olive oil twice daily. It is perhaps needless for me to say that the horse should have 2 or 3 weeks rest, or be rested until he travels sound.

Indigestion. — Rheumatism. — Tuberculosis.—Last Spring I purchased a thorobred Guernsey bull at which time he was in low flesh. I commenced feeding him three quarts meal and bran each day, he ran in good pasture all summer. Recently he has become very lame in both front legs which are considerably swollen from hoof to shoulder. Each fore leg bows out side-ways and he can hardly walk. What is the cause, and is there any remedy for his ailment? A reply in your veterinary column will be greatly appreciated by the writer and doubtless by other readers of your paper. S. E., Vernon, Pa.—If I owned your bull I would at once ascertain whether or not, he was free from tuberculosis, therefore he should be tested with tuberculin, not only once, but twice within a few weeks, providing he shows no reaction to first test. You forgot to state his age. His bones may perhaps be diseased, if so he will not recover. His food supply should be changed. Give him Fowler's Solution of Arsenic in feed or in drinking water 3 times a day, the dose for bull weighing 8 or 10 hundred pounds is ½ ounce. Give him 30 grains potassium iodide twice daily. He should be kept in a clean, dry, well ventilated stable and be well fed on grain, mixed hay and some roots.

Ringworm.—I have two yearling heifers that are troubled with some sore patches on skin around the head and neck. The skin is dry rough and both are inclined to rub themselves. The two run together, these sores were first noticed on one and in 30 days the other became diseased. I have applied coal-tar disinfectant, but it fails to stop the itchiness. I forgot to say the hair drops out, leaving the patch bald. H. K. P., Vernon, Pa.—As soon as you succeed in killing the ringworm parasites your heifers will get well. One of the best known remedies for this ailment is iodine. Paint sore parts every day or two with tincture of iodine and your heifers will soon recover. To start the hair, apply vaseline once a day.

"It may surprise you to learn," says F. W. Fenn in The American Magazine, "that the farmers are the greatest truck users in the country. Last year over 78,000 trucks were used in hauling farm products, whereas the manufacturers used only 65,000 and the retailers 64,000."

Will the livestock producer benefit by the proposed Kenyon and Kendrick bills?

Practical men in the industry at a hearing in Washington, say NO

Down in Washington, as you know, they are considering a plan of licensing the packing industry and putting it under the direction of a government official—

A political appointee with the power to experiment as he chooses with this vital business.

* * *

How will your brother stockmen and feeders like that?

Recently a number of them went to Washington to give their opinions. What follows is a fair sample of their testimony:

Robert J. Kleberg, Livestock Producer, Kingsville, Texas, testified that—

"I contend and believe that the producer of livestock who conducts his business properly has nothing whatever to fear from the packers. He needs the packers to prepare his product for the market and to distribute it. Without the aid of the packers, the production of livestock could not exist as an industry. . . . I do not believe that this licensing system and the taking of the stock yards away from the packers and the taking of the refrigerator cars away from them, the ownership away from these men and the management away from them is going to help."

D. B. Zimmerman, Cattle Raiser, Somerset, Pa., said that—

"I believe that if we should hamper any of the packing industries at the present time by any legislation, we would be hurting the producers' and consumers' best interests. I have read both the bills before this committee which proposed to regulate the packing industry and I am satisfied that th would b. detrimental to the best interests the cattle growers and the best interests of the meat consumers."

Horace Wilson, Washington Court House, Ohio, stated that—

"The objections that I have at this time came from the knowledge that I have of supervision the last two years and inconvenience we have been put to when shipping stock or feed or anything of that kind. We have got very poor service, and on the average it took double the time to get it to and from where we wanted it. For that reason I am opposed to government control."

J. G. Imboden, Decatur, Illinois, testified that—

"I am opposed to the bills as now introduced. . . . I think the discussing of our present system of handling will cripple the industry to some extent. . . I do not see anything in the bill whereby either the producer or the consumer is benefited by it. It will not add to the efficiency of the industry and will add to the cost of operating."

Scores of similar statements from the testimony of producers, farmers and feeders all over the country could be quoted if space would permit.

* * *

Do you want the packing industry under an inexperienced political appointee? The interests of the producer and the packer are mutual. If radical legislation should upset and disorganize this high efficiency of the packing industry, the producer would be hit as hard as the packer.

There is no question but that the cost of conducting the packing business will be materially increased by such legislation. The packer's profit—a fraction of a cent a pound from all sources—could not take care of such increases, which would necessarily be reflected in lower prices to producers or higher prices to retailers.

Swift & Company will be glad to mail a summary of the testimony of the livestock producers at the hearing in Washington. Write for a copy. Address Swift & Company, Union Stock Yards, Chicago

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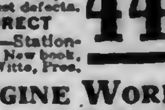

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Developing Dairy Industry in Delaware

Local Banks Cooperate With County Farm Bureaus in Improving Dairy Cattle

By R. O. BAUSMAN

Within a period of five years the dairy industry in Delaware has evolved from a small group of indifferent farmers maintaining a few mediocre cows on a ration of corn and corn fodder to an aggregate of organized farmers intelligently caring for highly bred grade and pure bred herds.

Carload of Cows Brought from Michigan into Delaware

Cow Testing Associations are Invaluable

The inception of this development was simultaneous with the advent of the three cow testing associations in 1915. Each association comprises twenty-six farmers who co-operatively employ a trained young man who spends one day out of each month on each man's farm, and while there weighs and tests, for butterfat, the milk produced by each cow, weighs the feed consumed, and computes the herd records for the month. In addition, he consults with the farmers incident to current problems such as breeding, feeding and general care of the herd.

Pursuant to the completion of the yearly records of the association, many of the farmers found that many of their cows were not only failing to produce a profit, but some were actually losing them money. A process of culling followed, and since the testing associations have been in vogue, out of about 1,000 cows tested annually, 125 to 150 unprofitable animals have been disposed of each year and sent to the block. These cows are being replaced by high grades and pure breds as fast as the owners find it practicable.

As a result of suggestions made by the testers, the average farmer is growing one or more crops on his farm which are suitable for feeding the dairy herd, and he has supplemented his old ration of corn and corn fodder with cotton seed meal, bran, ground soybean and alfalfa, clover and soybean hays.

Altho only a small percent of the farmers of the State are members of the cow testing associations, yet there is at least one member of an association located in every dairy community of the state whose herd serves as demonstration of the results that may be acquired by the use of improved methods in the management of the herd. This desire for better herds and better methods of management has radiated thru every dairy community of the State.

Local Banks Purchase Cattle

At the meetings at which the farmers gathered to discuss current agricultural problems, especially in reference to buying better breeding stock, they were confronted with the problem of securing the type of stock which they desired. It was impossible for them to buy them locally in sufficient number to be of any great value to them, but it was found, upon investigation, that well bred, purebred dairy cattle could be secured in the West in unlimited numbers and at reasonable prices. Two of the local banks of the state, both of which have community-spirited boards of directors, upon hearing of the proposed project agreed to buy the cattle and to distribute them among the farmers at actual cost. Pursuant to this proposal a committee was appointed, of which the County Agricultural Agent was a member, to go to Michigan to purchase the cattle. The committee found the status of the dairy industry in Michigan as represented, and in a very few days had purchased three car loads of well bred, mature cows. The committee secured a veterinarian authorized by the U. S. Bureau of Animal Industry to administer the tuberculin test.

Upon arriving in Delaware the cows were divided, a lot going to each of two different points where they were put on exhibition. The interest displayed was indeed gratifying, and in a very short time both lots were disposed of among the local farmers. Those farmers who were fortunate enough to secure a cow went to the bank, settled for her and took possession of his treasure. During the summer a great many inquiries were received at the farm bureau office relative to more of this type of cows, and in a few months the agricultural agent, upon authority of the same two banks, went to Michigan and purchased two more car loads of mature cows and distributed them among the farmers on the same plan.

In the meantime, the boys and girls became interested in the dairy cattle improvement project, and as a result the New Castle County Boys' and Girls' Pure Bred Dairy Cattle Club was organized and the banks purchased a car load of thirty-eight pure bred Holstein and Guernsey heifer calves and distributed among the members of the Club. According to the rules of the Club the members are responsible to the State Boys' and Girls' Club Department for three years. At the end of each year a show is held where the animals are exhibited and awards are made according to the condition and size of the animal, method of caring for it, and story written. The first show was held last fall at the Delaware State Fair, but as the heifers are now springing, two district shows were held this fall from which the six champions went to the State Fair where they formed part of the farm bureau exhibit and again went into competition.

Thru this project 100 pure bred cows, at an average cost of $275, and 25 pure bred heifer calves, at an average cost of $125 have been transported from their native State of Michigan and have found permanent homes on Delaware farms.

So far as possible, these cows have been placed one on a farm, and in each case has served as a demonstration of the results that may be expected from pure bred dairy cattle. Many of these farmers who received one of these cows have gone out to dairy centers and bought pure bred cows and many times a high class pure bred bull on their own initiative.

Pure Bred Bull Project

Interest is now concentrated on a project, the slogan of which is "A pure bred bull on every farm." According to this project which was launched by the State Holstein-Friesian Association, the breeders of pure bred cattle will make an even exchange of pure bred bull calves for mature scrub and grade bulls. This is a very liberal offer on the part of the pure bred breeders, but they are men who have a vision of the possibility of the pure bred dairy industry after the state has established its reputation as a center for high class dairy cattle. Many pure bred bulls are being bought outright. One of the main achievements of the project is a consignment sale of pure bred bull calves at which 22 pure bred calves supplanted grade and scrub bulls at an average cost of $108. Before this project is intact it will probably be necessary to ship into the State several car loads of pure bred males.

Milk Producers Organize

To assure themselves of a price whereby they can produce milk at a reasonable profit, the farmers of Delaware during the past winter have perfected twelve local organizations of the Interstate Milk Producers' Association. This Association comprises 7,000 farmers of eastern Pennsylvania, southern New Jersey, Maryland and Delaware. The Executive Committee of the Association meets monthly and acts on current business.

Test for Tuberculosis

The farmers have come to a realization of the importance of maintaining tuberculosis-free herds and supplying the public with healthful wholesome milk, and are gradually accepting the tuberculin test as a means of eradication of the disease. Local veterinarians have tested a great many herds for tuberculosis, and the U. S. Bureau of Animal Industry has detailed a veterinarian to Delaware to promote this work on the accredited herd plan.

County Farm Bureaus Active Organizations

The active organizations motivating this dairy industry improvement project in Delaware are the county farm bureaus. The county farm bureaus are permanent agricultural educational organizations each comprising from 500 to 800 farmers and farm wives, which are financed and managed by the Extension Department of Delaware College and the United States Department of Agriculture, co-operating.

The purposes of the county farm bureaus are to, by demonstrations, show the farmers and farm wives the value of better types of live stock and improved methods of live stock management; the value of better varieties of seeds and improved methods of cultivation, the proper application of barn yard manure and commercial fertilizers, the value of labor saving methods and machinery, the advantages of labor saving devices in the home, the importance of conservation of food, clothing and health, and the encouragement of a greater appreciation of better churches, schools and rural social life.

As the policies of the county farm bureaus become understood by the Delaware farmers and begin to materialize, an era of greater agricultural production and better living among the rural people will be experienced. Farmers will live in better homes, they will take a more active part in the affairs of the state, and they will learn to know their neighbors in the town and the townsfolk will learn to know the farmers and their many preplexing problems. The county farm bureaus are the medium which will perpetuate and permanently seal the bonds of co-operation between the rural and urban people in Delaware.

LABOR AND LIVING

In the Pennsylvania Farmer of November 8, the editorials on "Reduce Public Expenses" and "Where Does The Farmer Stand?" opened some interesting questions for discussion.

Why men and women are still kept at government jobs where they are really not needed is one thing too costly to allow for a day; yet there are many sinecures both in the state and national government which should be abolished to keep down expenses, and no one would suffer but those minus a job.

The tendency these days is to increase offices and create commissions, appoint inspectors for everything imaginable, advance salaries and pay wages above what any of these so-called inspectors, agents and officious officials could earn in an honest effort to make a living without such an appointment. It is usually secured through politics or by favoritism, instead of real worth.

Let appointments be made on merit or fitness or by examination, then more offices would have persons holding positions of which they are worthy.

Organized labor made demands which they generally got during the war, but when they demand collectiving barganing and a closed shop too, they ask one thing too much. When an employer cannot hire whom he pleases, or discharge a man belonging to a union, if he is not satisfactory as a workman, then something is wrong. Labor needs to try to give value in work for wages paid, and not simply try to put in the time. It is useless for organized labor to think they have the power to hold up the Government and run the country as they wish, when they are getting $6, or better a day and live and dress like bankers.

This so-called high cost of living in many cases is the cost of high living, or trying to live as others with more than labor incomes.

Should farmers not work more than the 8-hour day, then indeed, living as far as foods go, would be much higher, as farmers average near 12 hours a day, including chores, the year round, and the labor of children and women is not often counted in production of farm products.

The labor income on many farms for the whole family is not equal to that obtained by a day laborer. Farmers need more representation in conventions and gatherings such as met in Washington in October, and business men belonging to Chambers of Commerce are beginning to realize that the producer of foods is worthy of his hire" to as great an extent as any class of producers. In all this capital and labor agitation, the "Golden Rule" is a good guide.—J. N. Glover, Union Co., Pa.

GROWING, HARVESTING AND THRESHING SOYBEANS

The soybean is recommended as a crop to take the place of oats in the rotation, for this section; and this season we planted an acre or so to see what it would do. The variety chosen was Wilson, planted June 16, with about 150 lbs. of acid phosphate, at the rate of half a bushel of seed to the acre. We used a corn planter with special bean plates to put the crop in. The seed was inoculated before planting with a commercial culture, which gave nodules on the roots nearly as large as peas. The beans were harrowed just before they came up, as is done for corn, and cultivated twice. This kept them clean. We harvested them October 17, with a grain binder, which worked successfully. At this time most of the beans were colored, and half the leaves were fallen. The sheaves were set up three or four in a shock to cure, and hauled from the field and threshed Nov. 8. The vines and pods were very dry, but the beans were a little tough, and consequently did not crack. The thresherman had a large rye thresher which he "opened up" all the way, and reduced the speed of the engine somewhat. The vines were threshed perfectly clean, and practically none of the beans were split—a fine job. The yield was six bushels to the acre.

Union Stock Yards, Lancaster, Pa., Where Most Eastern Feeders Arrive

This crop was grown in the way of an experiment, and we have come to the following conclusions, based on the season's observation. 1.—The crop is satisfactory. A normal yield is about ten bushels or more to the acre. The seed sells at $4—$5 per bushel, which at that rate would yield a good income per acre. We would have secured a heavier yield if the rows had been closer together—twenty-eight or thirty inches instead of forty-two. We should have narrowed up the corn planter to thirty inches, or used the grain drill with several of the holes stopped. No doubt lime would have increased the yield, and the crop would probably do better planted again on the same ground, the soil having become inoculated.

2.—It can be handled successfully without special equipment. The binder and the grain stood out three weeks, and the sheaves, altho lightly bound, cured without any mold or taint, during rainy weather.

3.—It fits well in the rotation. If the soys follow corn and are sown the first week in June, the Wilson variety, at least, will mature in time (120 days) to sow wheat on the ground at the proper date. If the sheaves are carried off, the bean stubble can be dished into a fine seed bed, without plowing. This gives an advantage over oats, as it is necessary to plow the oat stubble when the ground is usually hard and dry to fit the land for wheat. The roots and stubble of the beans also add fixed atmospheric nitrogen to the soil, if inoculation is successful.

Compared with oats, the soys yield a greater feeding value or a greater cash return, than an average crop of this small grain. Even with a ton yield of six bushel per acre, we "broke even," and if we had secured four bushels more, would have had a good income as general crops go.—R. L. Scharring-Hansen.

COMPOSTING TO DESTROY THE CORN BORER

It was the farmers of Lexington, Mass., who "fired the shot that was heard around the world" in defense of American freedom and independence. And their great, great grandsons, the Lexington farmers of today, are equally determined that the recent invader, the European corn borer, shall be driven from their community. But like their ancestors they do not believe in wasteful methods of combatting the pest when the work can be made equally effective without the total destruction of the crops and injury to the soil.

The Lexington farmers believe that when the Federal Department of Agriculture experts destroy the corn borer by burning the cornstalks and stubble the organic matter and the useful bacteria that are in the top soil are burned and the productiveness of the soil is lessened for several years to come. It is claimed that the machine used by the government in burning the cornfields with a kerosene flame develops an intense heat that penetrates the ground and sterilizes the soil so that it becomes lifeless and unproductive.

It is proposed by the Lexington farmers to pull up all the corn stalks and stubble, and weeds, and pile them into a compost. This compost, it is believed, will develop sufficient heat during the season to kill the borer, and the vegetable matter in the compost decays in the course of time and becomes a rich fertilizer. Some of the farmers are using potato diggers in pulling the stubble.

If it is found that the corn borer can be destroyed by this method, its coming may not be without some compensation, for with the scarcity of stable manure, due to the increasing use of motor vehicles, the truck farmers will have to resort more largely to the old fashioned compost heap as a means of securing suitable fertilizer for their crops.

It is also claimed by the Lexington farmers that the corn fodder in infected fields can be saved for stock feeding and the borers destroyed by putting it into silos. The government officials are co-operating with the farmers in testing these new methods of corn borer control.—E. E. R.

SELECTING EXHIBITION EARS

Don't pick the largest ears you can find. They are generally rough, coarse and poorly proportioned. Choose symetrical and well proportioned ears that are of good average size. Uniformity of the exhibit is the best expression of trueness to type and care in selection and breeding in corn, as in hogs or poultry. Each ear should look as nearly as possible like the twin of any other ear in the lot, being uniform in size, shape and color of grain and cob. The least mixture as indicated by off-colored kernels or cobs will disqualify an exhibit in a high class show.

The kernels should be deep and uniform in shape, indentation and size. A long keystone shaped kernel is most desired. Kernels with rather rough tops are generally deeper than those with smooth tops. The rows should be straight and carried out well at butt and tip and there should bo very little space or furrow between them.

The butts and tips should be well filled and rounded out and the butts should be hollowed out and not too large. The cob and shank should be small but the latter should not be too small for the size of the ear. Don't leave part of the shank sticking to the butt, break or cut it out clean.

A good ear must be a good seed ear. Every ear must be fully matured and well cured. This is indicated by the firmness and solidity of the grain on the cob, a good, bright color and absolute freedom from mold or discoloration of the kernels, germs and butts. Kernels must be free from cracks and blisters, plump and not pinched at the tip or too rough or chaffy at the top.

TRUE CO-OPERATION

The Farmer and Feed Dealer

In days gone by the hard working farmer was frequently called "Rube." Unappreciative people did not stop to think of the part the farmer played ever since the good old Colonial days. Our forefathers blasted their way into the wilderness and prepared for us, their children, the strong nation we have today. They erected our schools and developed our educational system so that we might take up life's burdens in a much different way. Perhaps one reason why they were called "Rubes" was because of their unselfishness in giving up their time for education, in laboring as humble servants of the soil, so that we might enjoy the greater advantages of the twentieth century.

The twentieth century farmer is far different from those of Colonial days. He is well-to-do, better educated, has the advantages of years of experimentation in the science of farming; the preparation of the soil, liming, fertilization, selection and treating of seeds, and a thousand other things that our forefathers did not know. He has progressed as he has prospered. In his progressiveness he has come face to face with two vital problems of his life: Proper buying of his supplies and proper merchandising of his products. His slogan to-day is organization and co-operative buying. Co-operative buying is only a natural development in his life of progress. As a feed dealer, it is my business to co-operate with the farmer in solving this very problem of correct buying. In order to do so I want to relate my personal experience.

My father started business at the home place forty-five years ago. I left High School at the age of eighteen (which was a great mistake), and have now spent seventeen years in serving our friends and patrons, the farmers. In that time we have suffered fires, floods, a bank failure, and have lost thousands of dollars on book accounts, by trusting people that we thought would pay. We have been alert every minute, watching the grain markets, which are influenced by frosts in Canada, drouths in the South, black rust in the West, and war or peace in Europe. I have lain awake many and many nights planning the little details that bring business success, and by correct buying on a low market have been able many times to serve our customers with feed at a lower price than we could later buy in full carload lots.

This slogan of to-day "Co-operative Buying" is right and just. We do not blame the farmer for wanting to buy where he can save, for this has been the motto of our business life, "correct buying." The feed dealer is wholly dependant on his farmer friends for his business, and the same is true of the farmers who do not raise their own grain. The farmer must depend on the dealer, or a substitute dealer. Often the feed dealer is looked upon as a middleman, a drone. This is not true. All of these years our men and ourselves have been on duty every day from early morning until late at night. We have given all our time and strength and have come home worn out. And now, in looking back after years of service, we can say that for every dollar received, we have given full value in return.

Now, can our farmer friends put disinterested men in our places and buy their supplies for less money. From experience, we say no. Just suppose that a committee from a farmers' organization should call upon us and say. "We are going to buy your business, your buildings, your stock—everything. But we must have men to run this business. We believe that from the years of experience you and your men have had, that you will be able to conduct it much more successfully than any men we can get. We ask you to do this and in return we will give you a living salary." We have a sigh of relief. This is too good to be true. No more anxious thoughts or worries over the future of the grain or seed markets. No more wakeful hours planning little details. No more anxious thoughts over bad book accounts, floods or fires. Then, best of all, we get all we had in the past, "A Modest Living."

Automatic Engine Disk; Note the Sweep—20 Discs

The probelm of extortion was solved years ago by business competition. While competition is the life of trade, it can be safely said that competition will not permit the feed dealer to overcharge to-day for there is scarcely a town so small that it does not have from one to three feed stores. Many times when the market has declined, we quickly learned that because of competition we must drop our prices at once, sometimes even below cost, in order to keep our customers from going to our competitors. We must drop with the market, and must in these times, have our prices correct; only a small commission above the market price.

A Two-year Old Suffolk Punch Mare. Owned by F. S. Peer, New York

Now would it not be far better to leave this problem of buying supplies in the hands of the experienced feed dealer who has chosen this work for his life's vocation, and has spent years in studying the grain markets and working out in detail all the little problems connected with it? Or shall this very important matter be placed in the hands of men who are only interested in their salary? As with the farmer, the dealer's most important problem is correct buying. Many and many times hundreds of dollars are lost in buying at the wrong time, and for this reason, we say that since it is absolutely necessary that some one handle and supply the farmer with feed, that the co-operative feed store with its salaried men cannot give better results than we have been given in the past by the regularly established feed dealer.—A Country Miller.

CLEAN UP AROUND THE BUILDINGS

Have you become so used to conditions around your farm buildings that you do not see that there are thousands of things which need attention? Your friends and strangers notice things you dont think about because you are too busy, too heedless or too unobserving to realize it.

Last Election Day after voting I stopped to visit with a very successful trucker of life long acquaintance. We spent two very pleasant hours around the buildings. What I saw made me think about the condition of things around my farm. I will give the readers an idea of what I saw; it may do some good.

Near the house a few new grape vines were making a splendid growth but they had fallen from their supports. Unless they are tied up soon, they will be ruined during the winter. The wood pile was spread over a half acre and it contained split wood, sawed blocks ready for splitting, long sticks of all sizes, broken limbs from nearby trees, broken barrels, baskets, crates, etc. How much better it would look if everything was chopped and kept on a compact pile!

Around the farm buildings things were even more unsightly. Trash of every description was spread around helter-skelter. The market house is the building used for the storage and preparation of the farm produce but even that building was so cluttered up that it was quite impossible to use more than half of it. Several tons of fertilizer were in the back part of it, even tho that fertilizer could just as well have been stored in a place which could be used for no other purpose. Two barrels full of wood ashes stood near the stove showing that they had been there since last winter. The work bench in the corner was piled high with all sorts of junk, etc.

The fact is that there were so many things out of shape that it would require pages to tell all. A pile of manure was behind the stable door; besides rotting the weather boards, it was washing away with every rain because the water poured onto it directly from the roof. An old wagon was standing in the midst of tall weeds. Evidently, the wagon had been there several years' waiting for the junk man. Up stairs in the barn, the space was devoted to the storage of "nothing;" in fact it was piled high with nothing worth keeping. An old fanning mill which had not been used for years was being stored. Fifteen years ago concrete forms had been used in making pillars around the house; there they were being kept. They never will be used again. Why keep them? A great heap of lumber was spread over half the space. It contained boards and sticks of every description from oak slabs to brittle moulding. Most of the boards and pieces were rotted, split or filled with nail holes. Of course it is a handy thing to have a pile of old lumber, but usually if anything is needed it is cheaper to go to the lumber yard and get just exactly what is needed.

The driveways thru the farm were in good condition for travel, but on each side there were abandoned barrels, crates, baskets, tools and partly full fertilizer bags. The late crops were excellent and the producer had every reason to be proud. I realized when I reached home it might be a good thing for me to see what I could do to improve the appearance and working conditions, around my farm.—R. W. DeBaun.

PENNSYLVANIA FARMER
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ESTABLISHED 1880 PUBLISHED WEEKLY

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PHILADELPHIA, PA., NOVEMBER 29, 1919.
VOLUME 46 NUMBER 22

Our job is to serve our readers. Whenever and wherever we can help you, write us.—The Editors.

Harmful Misrepresentation

THE Monthly Bulletin of the Pennsylvania Manufacturers' Association reprints the following from the New York World:

> According to the New York World:—Of the millions of farmers in the United States less than one-quarter of 1 per cent. pay an income tax and practically all of them refuse to make returns. And yet the value of their annual product exceeds $20,000,000,000, which is largely profit, while the $30,000,000,000 worth of products turned out by the manufacturers will hardly show 6 per cent. net profit.

Acquainted as we are with the habit of certain city dailies to print misstatements about farmers and agriculture in general, we are not surprised at the original publication, but we are surprised that a sheet representing an association of business men like the Manufacturers' Association should clip it and pass it along, thus giving tacit approval to the libel.

Reliable Dairy Feeds

WE frequently receive requests from readers to recommend a good brand of Dairy feed. This we obviously cannot do. It is not the province of a reliable farm paper to differentiate between honest firms in any business. The reliability of a firm is attested by our acceptance and printing of an advertisement, and we would not hesitate to buy from any firm whose advertisement we accept. The feed law of Pennsylvania is so strict that a buyer of feeds may feel confident that any brand he is likely to find offered for sale is as represented.

The feed question is receiving special attention just now because of the discussion of the Haugen Feed bill regulating the branding of mixed feed offered for interstate shipment. This was designed to protect buyers living in states which do not have adequate laws on this subject. The unthinking might infer from the agitation accompanying this bill that all manufacturers of feed are dishonest. This is far from true. In fact, it is the exception to find a feed that is not as represented, but all protective laws are to take care of the exceptional cases. No well established firm will risk their reputation by misrepresenting their product.

Farm Bureau Federation

WHAT may prove to be an epoch-making meeting in the development of agriculture was held in Chicago November 12-14, a short report of which appears on page 20 of this issue. The origin of this movement began some time ago in the Middle West where some aggressive farmer-members of the county bureaus became dissatisfied with the limited usefulness of the bureaus as planned by the federal authorities. They also saw the possibilities of a truly national organization of farmers, since bureaus have been organized in nearly all the 2900 counties of the United States. This is a movement by farmers to convert the farm bureau into a really farmer organization to be managed and conducted for the improvement of every phase of agriculture.

This is the fourth "national farm organization," three of them already having headquarters at Washington. It will be interesting to see how each developes or dwindles within the next two years, because farmers are now convinced that they must have a live national organization with a national headquarters which will represent their interests in the nation. It is safe to predict that the surviving body will be the one which shows itself best able to minister to all the needs of the farmer, and which will be aggressive enough to hold its own with contending interests. The wise farmer will study all these movements impartially and after he is convinced which is most worthy will give it his support.

More Sheep and Less Shoddy

THE shoddy industry is assuming alarming proportions in America. It is claimed by well-posted authorities that more than eighty per cent. of the raw material used in manufacturing "all wool" clothing is shoddy. This will explain why it is almost impossible for us to buy clothes that will wear as well as formerly. It is time the public was protected from shoddy profiteers who are charging "all wool" prices for yards of re-vamped shoddy. There is a legitimate place for shoddy in manufacturing fabrics, the same as there is for oleomargerine in the human dietry, but there is no more reason why shoddy should be sold as wool than there is why oleomargerine should be sold as butter. A suit of clothes or overcoat made of genuine wool will wear for a long time and hold its shape. When shoddy is used the strength of the fabric is impaired and it shows its bad feature in a short time.

Every person interested in buying wearing apparel, as well as producers of wool, should make a careful study of the pure fabric law now before Congress. The passing of such a law would mean that buyers of wool apparel would be insured against shoddy, and that a larger portion of the money expended would go to the men who are keeping the sheep. There never was a time when both producers of wool and purchasers of wearing apparel realized the value of a pure fabric law more than they do today, and now is the time for Congress to free the public from clothing profiteers, and wool growers from unfair competition.

The menace to wool growers from the general use of shoddy in clothing is greater than is the dumping of wool into America from foreign countries, and yet for years politicians have been pleading for the protection of the American sheep industry. What the public and the sheep industry need is protection from shoddy manufacturers and rag men. When it was necessary to protect the public from adulterated foods, Congress pased the pure food law. Now the public needs a pure-clothes law. The wool growers are only asking the same kind of protection that Congress gave the dairy farmers. Will Congress see that they have it?

Partners With the Farmer

A good partner is always putting money back into the business. That is what happens when the farmer adopts good live stock to be fed on the farm as partners. He may withdraw his own share of the money, but his partners share is used to build up the firm's assets. Dairy cattle and sheep keep their money in the business and cause it to grow and expend. There is no danger of accumulating too large a surplus of capital. The larger crops will take care of the extra capitalization of plant food, grow with it growth and call for more.

As the crops improve more animals can be fed and more manure returned to the fields. Then the soil can be deepened and improved until there is even greater gain per day, per month, per year, The improved crops of forage and grain means more milk, more wool, more meat. The farmer who chooses live stock for farm partners knows less and less of crop failure and unfavorable seasons. A good deep soil, well-filled with vegetable matter and available plant food takes unto itself thankfully the rain that falls, storing it away against a dry time.

Do not cry out against live stock because you have had some unprofitable experience with scrubs, or have not given your animals good care. Blame yourself rather that you chose poor partners, or provided insufficient feed of the right kind. The money-grasping farmer is always short of good forage crops and pasture grasses. He will give his richest fields for grain and cash crops because he can exchange the available plant food for immediate cash. The forage crops and grasses he confines to run-down fields and compels his cattle and sheep to wear out tooth and hoof to make a living.

Live stock, however, may be made profitable partners of the farmer if good individuals are selected, and the best land devoted to growing suitable food crops for them, instead of putting inferior animals on half-worked, run-down land and leaving them to shift for themselves. Merely giving good animals the proper kinds of home-grown feeding materials and proper care and housing will about double the net income, as well as the manurial value of the feeds fed upon the farm. That is one safe way of putting money back into the business.

Order and Neatness on the Farm

LACK of order and neatness about the buildings is the one great fault of our American farming. The pioneer, who made his home in the wilderness, was so busy making a living that he overlooked the home nest. The conveniences and refinements of the home and the beautification of th ground have so often been left to the last that the work has seldom been reached. We have farmed to raise more crops and stock for so many years that the development of the home has been seriously neglected. Each farm must have its barnyard and junk pile, but it need not be all junk pile.

Another side to the question of order and neatness on the farm is that of saving steps and time, as well as the feeling of satisfaction and security which comes with knowing that the tools are properly protected from the weather and the stock in safe enclosures until they are changed. The farm offers more opportunity for plans and conveniences for saving steps and time than most other kinds of business. Think over your methods of arranging fields and doing chores and determine the opportunities for saving steps and time. Figure the loss from neglect of farm tools. Consider the risks from stock breaking thru gates and fences and getting into fields of clover and corn. Start right now to rob life of its cares and worries by taking out a wagon and gathering up every scrap of lumber and old iron and putting it on the wood pile or scrap heap. Such work may save a case of lockjaw, or prevent injury to a valuable animal. It is dangerous for a man's family or stock to walk over yards with boards with nails or jagged machines lying about. Then get after the weeds and trash about the buildings and make a good clean up. It is a shame to let such little things rob one of the pleasure of farm life.

The development of the American home should be the fundamental object of our farming. The rose may bloom in a weed patch, but it cannot approximate the glory of the American Beauty in the rose garden. Environment is an essential of education. Order and neatness on the farm mean much in developing a love for the country in the boys and girls. The family should be housed comfortably, amid surroundings that will instill a love for the beautiful. For the sake of our remaining years on the farm, for the sake of the boys and girls who will come after us, let us begin to take more interest in our home and surroundings and improve conditions so far as we are able.

Whatever may happen to the rest of the world the farmer must plan his business so that it will keep well ahead of the world's food requirements. In that way can the situation be held together until society can be nursed back to health. Capital and labor are in an ugly temper just now and not altogether responsible for what they do. The farmer must pilot the ship until the storm is over.

HARRISBURG LETTER

Teaching What is Needed.—More plain truths about the shortcomings of Pennsylvania's educational system as it relates to the country as distinguished from the town were told at the State Educational Congress held in the State Capitol last week than have been expressed in many months. For the last half dozen years there has been a tradition about the State House, but in very few other places, that the Keystone State was a high ranker in educational matters. At an early period in the Sproul administration indications came from the governor's office that the educational system was being quoted too high and while the agitation over the increase of salaries for teachers sidetracked almost everything relative to schooling owing to the urgency of that proposition enough was launched to start legislators to thinking. Dr. Thomas E. Finegan, the new state superintendent, was selected largely because of his familiarity with the rural school system in New York State and his observations in the New England and Western States. While his illness kept him away from the congress which he conceived and planned, the results obtained in the free interchange of opinions were held to be well worth the time, effort and expense given to the gathering. The governor remained in Harrisburg during the entire congress and was in touch with many of the school men and visitors, commenting just before leaving for a ten days' vacation that he was impressed by the earnestness with which the subjects were discussed and very glad indeed that the debates had the "lid off." The conclusions filed by the people at each of the score or more of specialized meetings into which the congress divided minced no words in regard to needs and will be useful in the formulation of future school policy. It is the plan of the governor to reorganize the school system and put it on a basis commensurate with the standing of the State in other lines if it takes millions more to do it. He said so at the meeting in which he opened the discussion and the idea is to go at it much as has been done in regard to the departments of Agriculture, Highways, Labor and Industry, and Health, all of which are doing sixty percent more work than at this time last year, while the Public Service, Forestry and other branches are undergoing some speeding up which will produce interesting results before very long.

Some Frank Conclusions.—In almost everyone of the reports submitted the point was emphasized that teaching in Pennsylvania schools should be adapted to the needs of the community and not made up on a basis that fitted New England, for instance. Pronounced opposition to the teaching of girls in home making classes the right way to brown muffins instead of the trick of preparing a well potato or corn meal mush may be cited as one of the criticisms heard. The sections on rural education, school support and vocational education discussed shortcomings of the present system and misdirected energies in a way that must have made the Capitol chandeliers tingle. The school districts were criticised for not having community spirit, for maintaining school houses with mid-century facilities and for failing to board the teachers, while the authorities were declared not to be in touch with the needs of the district where schools were located in many cases and to be adhering to curicula which skimed the surface of essentials, the State coming in for raps for failing to properly apportion the school funds.

NEW YORK LETTER

Deer Hunting Over.—When the Legislature withdrew its protection of does it called out more hunters than the Adirondocks ever saw before. Young men who had learned to shoot in the army. Official figures are not yet available but it is certain that during the six weeks of the season fifteen hunters were killed and twenty-five are suffering from the wounds of soft nosed bullets, a record unequalled for human bloodshed in the woods, and in the number of deer killed. An army of 250,000 hunters went into the woods and it is known that many secured more than the one deer allowed.

To Censor Motion Pictures.—At the 25th annual meeting of the New York State Federation of Women's Clubs in Elmira last week a resolution was passed after considerable individual activity on the part of the clubs of the state, calling for a state censorship of motion pictures. The clubs have been checking up the harmful films shown, and say that they are unexpectedly prevalent and that atmost no program fails to show more or less films that while not actually harmful are merely a waste of time and money in preparation and that produce in the young false ideas of life. The influence of the movies is said to be equal in educational effects to no other factor, but the schools of the country—hence the need of their being safe and elevating. The merely amusing film is conceded to have a mission of its own and is not attacked by the clubs.

Sheep in the State.—At a recent meeting of the Sheep Breeders' Association of Cortland County the fact was brought out that where at one time there were 6½ million sheep in the state there are now but 400,000, and that 4,000 of these were killed by dogs since last May. The policy of permitting foreign wool to come in free of duty was scored, and a resolution was sent to Congress protesting this and asking for the labelling by manufacturers of garments to show the amount of virgin wool used in each. The local use of more Cortland county lambs and mutton was urged.

Two Practical Campaigns.—This week is being regarded as "Buy Books for Children" week, when all parents are urged to encourage a love of reading in their children. This is especially applicable to rural homes, where reading is one of the most valuable of educations and amusements. Next week will be observed as a special time for city owners of motor vehicles to help in the distribution of foods, and in the saving of much food that might otherwise be allowed to waste, by going to the farms and filling up their baskets with provisions. Farmers are urged to co-operated by advertising what they have on hand to sell.

Rainbow Sugar.—Sugar conditions are somewhat relieved here—with the receipt of shipments of coarse granulated sugar known as "Rainbow" sugar. Householders welcome the news that the duty on imported sugar is to be removed.

For a Greater Fair.—The Chamber of Commerce dinner in Syracuse to the Lieutenant Governor unbottled a lot of enthusiasm on the part of this city for a greater state fair. This city is now actually supporting the fair in a practical way, and is studying means of making the fair more serviceable to the farmer. Among the proposals for better service is a big camping site for farm families, a big cattle judging coliseum, and the improvement of present facilities—to be in evidence in 1920.

Milk Strike Danger.—A four-day canvas of state milk sections discloses an unusual number of auction sales of dairy cattle contemplated for the next fortnight. The boycott of milk in New York City means a heavy loss to producers. N. H. Strome, councillor for the first district of the New York Federation of Agriculture is advising the fair price milk committee that the remedy for conditions is for the City of New York to take over the distribution of milk. He says the egg situation parallels the milk situation, with eggs now $1 per dozen and probably going to $1.50—while the farmer and the poultry breeder have not replenished their poultry flocks.

Fur Prices.—Buyers of furs in Northern New York are paying 15 to 20% more for furs than last year. Skunk skins bring $6 to $7, the lowest grades quoted being $2. Muskrats bring $1; coons $5 and $6; foxes $12 and $5; rabbits 25 cents. Muskrats are scarce this year. Deer skins bring $2 to $3.

"Work and Save" Drive.—Four hundred men and women of six central counties met this week in Syracuse by call of the Federal Reserve Bank of New York. They voted to get equally behind the "Work and Save" policy of the Treasury Department. Never within two generations have people been so determined to find a solution of economic conditions, and this slogan expresses their belief as to the method of doing so.

Dairy Notes.—Wayne County farmers are to have a series of barn demonstrations this week when Prof. Royce will emphasize the need of right feeding, care and breeding of cows. The Holstein-Friesien Club of Tompkins county is a newly organized association that is launching a campaign for tuberculosis-free accredited dairy herds. There are 24 members and their first effort was a credible exhibit of Holsteins at the Tompkins county fair in September. The club will co-operate with the State College in the introduction of pure bred Holstein stock among the farmers of the county. The farm Bureau Committeemen of this county hold their annual meeting November 26, when S. L. Strivings, president the State Federation of Farm Bureaus with other well-known men will speak.

National Federation of Farm Bureaus.—New York's delegation to the National Conference of Farm Bureaus at Chicago last week, with their principles, were actively supported by the New England delegations, by the South and by California as having practically the same interests. Their policies were in some cases opposed to those of the States of the corn belt, where farms are large and valuable, and $5 to $15 memberships fees in county Farm Bureaus are common, and where the State Federation are supported in proportion. There delegates wanted to fix the dues to the National Federation which was there formed at a much higher figure than the eastern delegation approved. A wise compromise was effected in setting the dues at 10% of the county dues for the previous year. Eastern, Southern and Californian farms are small and many, with a consequently big membership, making the fees proportionally smaller. New York was the biggest membership of any, 67,000, and at 10 cents per member this year the sum for National Support is from the start about $6000. The eastern policy is a cautions one; begin carefully, do things before you call for much money, and then raise what money is need. The western policy is the converse, get a big sum together to work with before knowing just what may be done with it. New York's reply to the welcoming address won ringing applause, with its declaration of loyalty to our flag and intolerance of radicalism. Expressing the aim of the Federation as being one of service to the nation, and to the end that the best citizens of the nation might continue to live on the farms.

NEW JERSEY NEWS

Completion of Soil Survey Near.—A soil survey of the Chatsworth area in Atlantic, Burlington, Ocean and Monmouth Counties has been made by State Geologist H. B. Kummel, of the State Department of Conservation and Development, and H. H. Bennett, of the Federal Bureau of Soils, Washington, D. C. The survey will be completed after about two weeks of field work. This area, which extends from Tom's River southward to Hammonton, includes a large portion of the Jersey "pine belt." The high quality and adaptability of some of the included soils for intensive farming and the sterility of others have caused much unfortunate misrepresentation in the past. The survey has an important bearing on the development of this section in that it gives a basis for determining what part of the forested area may be profitably cleared for agricultural purposes and what should remain in forest.

The Sussex, Freehold and Camden areas have been completed, and reports and maps published. Reports and maps of the Belvidere, Millville and Bernardsville areas are now on the press. Altho the Trenton and Salem areas were surveyed years ago, they will be covered again to bring the data up to the present standard. As the northeastern area is suburban rather than agricultural only parts of it warrant a detailed survey. It is estimated that within three years the soil survey of the entire State will be completed.

Tour to Purchase Cows.—There is considerable demand for good dairy cattle in Mercer County, and in view of this fact, County Agent Barnhart is planning a farmers' auto tour to Somerset County in the near future for the purpose of buying dairy cattle. County Agent Haines, of Somerset County, has reported that there are a great many pure bred Holstein-Friesian cows and heifers for sale in his county, and that if the Mercer County farmers would indicate their wants to him, he would map out a short trip thro the dairy section of Somerset County and make arrangements with dairymen who have cattle for sale to have them where they can be seen on the day of the trip. Holstein-Friesian breeders in Mercer County met during the week at the court house in Trenton and organized a Mercer County Holstein-Friesian Breeders' Association, while a constitution and by-laws that were previously drawn up were adopted. Officers were also elected and plans laid for the buying, selling and advertising of pure bred Holstein-Friesian cattle in this section.

High Milk Cost in Newark.—The remedy for the existing high price of milk in Newark and sections in that part of Jersey has been laid at the door of the consumer, while it has been claimed that employment of the cash and carry system would reduce the cost of the product there to 14 or 15 cents per quart. It has also been said that the desire for early morning delivery at homes is the factor compelling the present high rate. This solution and explanation of the problem arising from the recent increase made in the price of milk by various companies distributing milk in Newark were offered by milk dealers in attendance at conference of the North Jersey city. The dealers' disapproval of a suggestion offered by Health Officer Craster for a pooling of the delivery systems. It was stated that similar experiments to lower milk prices had failed in Philadelphia, New York and New Haven, Conn. Mayor Gillen informed the dealers that milk was being sold by the City of Newark for 12 cents per quart-loose, but he said he thought it was doubtful if it could be sold bottled for 13 cents. He added, however, that it could be sold loose for less than 12 cents. The Mayor also stated that the City of Newark did not suffer any loss as a result of surplus milk. He said that any of the product that is left over is made into butter.

NATIONAL GRANGE ELECTS OFFICERS

The National Grange elected officers Thursday, November 18th. S. J. Lowell, Master of the New York State Grange was elected National Master and the other officers are as follows:

Overseer, B. Needham, Kansas; Lecturer, J. C. Ketcham, Michigan; Steward, Clark Baumgarner, Montana; Assistant Steward, O. L. Martin, Vermont; Chaplain, W. W. Deal, Idaho; Treasurer, L. H. Wright, Indiana; Secretary, C. M. Freeman, Ohio; Gate Keeper, F. A. Rodgers, New Hampshire; Lady Assistant Steward, Mrs. L. J. Taber, Ohio; Ceres, Mrs. C. L. Hunt, California; Flora, Mrs. C. O. Raine, Missouri; Pomona, Mrs. J. A. McSparran, Pennsylvania; Members Executive Committee, T. C. Atkeson, West Virginia and W. J. Thompson, Maine; Member Board of Managers, National Grange Monthly, C. L. Hunt, California.

Resolutions adopted up to this time include recommendations for business and legislative co-operation; strict prohibition enforcement legislation; 100% Americanism; orderly government and the rule of the majority; personal and governmental economy; strong government control of corporations, especially those engaged in supplying the necessaries of life; punishment for profiteers by imprisonment as well as fine; opposition to all government price fixing and opposition to taxation of Land Bank Bonds.

The Grange adopted a resolution declaring that the secretary of agriculture should be a practical farmer and pledging its efforts to securing the appointment of a man "fulfilling these conditions regardless of politics." It also adopted a resolution opposing universal military training and a large standing army and deploring "a caste of military authority which has its sole excuse in its shoulder strap."—A. M. Loomis.

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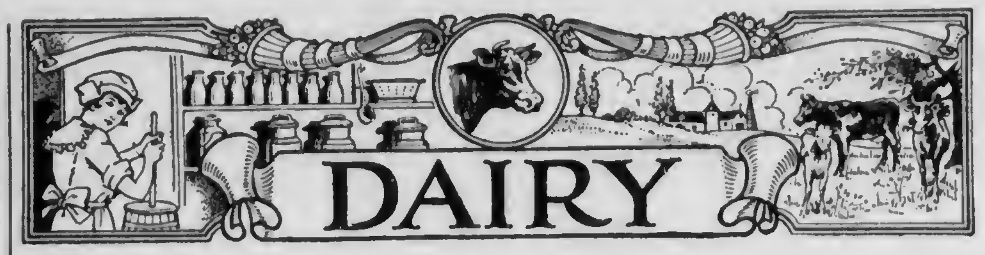

Organization Boosts Dairying

Huntingdon County Coming Into its Own as a Dairy Center

It was but a short six months ago when the tourist, winding his way thru the wooded hills and the fertile valleys of Huntingdon County, Pa. would have considerable difficulty in locating a mere dozen of breeders of purebred dairy cattle. But in the last few months there has come a big change in the hearts of the dairymen of the county. They have improved their market thru the co-operation of all the farmers interested in dairying, thru their local branches of the Inter-State Milk Producers' Association and thru the efforts of the County Farm Bureau.

With the improvement of the market has come the new interest in dairying and a definite confidence as to the future of that industry for the county. Our dairymen had for many years been laboring under the discouraging condition of an entirely local and very much limited market. The demand for the products of the dairy was very irregular and of course the price paid the farmers for these products was low, as is always the case when there is a surplus production of any farm product. That is, the price was made to suit the consumer, represented by the dealer, with little regard to the producer and his costs.

This condition applied particularly to the central part of the county where the only market of importance was the county seat, Huntingdon, a town of about eight thousand inhabitants. The territory about the town is of such character that it was able to produce more than the town needed and as a result there was a surplus of dairy products on the market during most months of the year. This was surely not conducive to any increase in the dairy industry.

The dairymen saw that this condition must be changed or many of them would have to bid farewell to their dairy cows. They did not want to sell their cows for they knew that they were the most efficient transformers of farm roughages into human food. So they called on their farm bureau for assistance and after a few months of earnest work in connection with the Inter-State Milk Producers' Association, a Philadelphia milk company was induced to locate a cooling and shipping station at Huntingdon.

At first this company had some doubts as to the outcome of the plant, but when they opened the doors on November 1st, last year, and found two large milk trucks waiting to be unloaded, with many near-by farmers coming in with their individual loads of milk, they were convinced that the farmers meant business. The interest increased until in the spring of 1919, seven routes had been established which were bringing in a total of 200 hundred-pound cans full of milk, with prospects for another route as soon as that extra milk could be handled.

The interest in improved livestock has been no small outgrowth of this scheme of agricultural advancement. In fact, the whole of agriculture in the county has taken rapid and long strides in the last few months. As a prominent editor of the town expressed it, "Agriculture is looking up, and stepping forward in confidence." The business men of Huntingdon also are coming to see what important relationship exists between agricultural welfare and urban welfare. They are realizing that without a prosperous agriculture back of them, a prosperous city is almost an impossibility.

To secure concerted and immediate action along the line of improved livestock, the county farm bureau organized two dairy calf-feeding clubs and the results have been most encouraging. Twenty-four registered calves have been entered in the two clubs with more requests for calves to be filled when proper ones can be located. Eighteen of the calves are Holsteins, four are Guernseys and two are Milking Shorthorns. Each one is of choice producing stock and from lines of popular breeding. The clubs are to be run as cow clubs when the calves mature.

Besides the calves that have been brought into the county, the County Agent now has orders for two carloads of grade and registered Holsteins and one carload of grade and registered Guernseys that will be brought in as soon as proper animals can be located.

The banks of Huntingdon have joined hands in supporting this program of improvement of livetock and have offered liberal prizes for the winners of each of the clubs. The Supplee-Wills-Jones Milk Company has offered a silver cup for the sweepstakes champion of the two clubs. Everyone is joining hands for community advancement, both country and town residents. There is no longer so much of the cut-throat spirit between town and country folk; each is more fully realizing the necessity for harmonious and concerted action for rapid strides toward a better Huntingdon County.—R. S. Clark, County Agent.

CALF MEAL

Can you give me a recipe for making a good calf meal to raise calves without milk? The advertised meals are from $150 to $175 per ton, which seems unreasonable.—D. C. E., Montcalm Co.

The Wisconsin Experiment Station made some quite exhaustive experiments in raising young calves without milk. They found they got the best results when a mixture of various grains and food products were combined. Mix corn meal, ground oats, ground barley, ground wheat, wheat bran and middlings, oil meal—do not use cottonseed meal—and any other food stuffs which you can get, all thoroughly together, and this combination seems to give better results than any other food.

You must bear in mind, however, that there is no substitute for milk for young calves. The calf should have the first milk of its dam for several days at least, then this whole milk can be gradually lessened and skim-milk used as a substitute, but the calf ought to have some milk in its ration until it is old enough to eat some clover hay.

Professor McCollum has proved in his nutrition experiments that the life-giving vitamines so essential to the development of normal animals are found only in the butter-fat of milk and the green leaves of plants. Now, the calf should have some milk until it is old enough to eat the green leaves of plants, then the milk can be gradually taken away and a combination of these grain foods can be entirely substituted with, of course, all the good hay the calf will eat.

A young calf can be successfully raised without milk when very young if one will make hay tea by boiling clover hay just as our pioneer fore-fathers did and mixing grain with this hay tea. In this you have the nearest that can be obtained as a substitute for milk. In this hay tea you have the extract of these same vitamines we have in butter-fat, which are absolutely necessary for normal development.

SAVE THE PURE BRED BULLS

Last year the number of pure bred bulls calves that went to slaughter ran into the thousands, the great bulk of which should be rendering service in improving the dairy herds all over the United States. The question is how are we going to bring in contact the person who has these bull calves for sale and the person who needs them in scrub or grade herds throughout the country. I have spent a good deal of time trying to work out a mode of procedure that would bring about this contact. I have realized that if a farmer in Georgia or Alabama who had scrub cows could come in contact with a dairy farmer in New York or Pennsylvania who was selling pure bred bull calves for veal, that the problem would be solved. I have realized also that the great bulk of pure bred animals are raised by dairy farmers who maintain and keep a herd of pure bred dairy cattle because they are the most economical preducers of milk and dairy products and they have no faculty and make no particular effort to advertise or in any either manner call attention to the bull calves that they produce. They keep the heifers largely to replace their own cows, or to increase their herds, or perhaps for sale, as there is always a ready market for the females, but the bull calves are not advertised and because some one does not come around and offer to buy them the dairy farmer of Northern New York State thinks he is forced to sell these bull calves for veal. I take it that many of them ought to be sold for veal, but the great bulk of them are from high-class pure bred dairy cows. They are from cows that have been improved by breeding for years, and many of them from herds that are averaging from 6,000 to 10,000-lbs. of milk in a year under ordinary care, and from well bred sires. It is a shame and an outrage on the consuming public that these young bulls are not used for the betterment of the herds. These dairy farmers could sell them if they would advertise them for sale, but it is too much trouble to write the letter, they do not want to be bothered about it. The result is there is no contact between the man who needs and wants, and ought to have the

pure bred bull calf, and the man who raises him and wants the market. On the other hand, the owner of the scrub herd or the grade herd, whether he lives in Georgia, Alabama, Pennsylvania, Maryland or New York (and there are counties in the State of New York where there are as many grade and scrub bulls in use as there are pure bred) makes no apparent effort to improve his dairy machinery. These farmers or dairymen just simply keep a bull to get the cow in calf, perhaps selling the heifer calves as well as the bull calves for veal, because they are not eligible to registry. The result is we are not improving the facilities for producing dairy products as fast as we ought to.

I am satisfied one of the best ways is thru the County Agent. Practically every county now that is worth while has a County Agent, and as a whole they are the most intelligent, most public-spirited lot of young men that there are in America. Most of them have a lot of tact and good judgment, and I believe they can help us work out this problem. The average farmer very much prefers to talk to the County Agent and tell him what he has and what he would like rather than to start out to write the agricultural department of his own state college and get the name of some County Agent somewhere. He prefers to talk to his own County Agent and if he does not know the County Agent, if he has it in his mind, will make a special effort to get bred sires in his territory. I want the County Agents in territory such as Northern New York and Wisconsin where the dairy industry is intensified, where there are hundreds of pure bred bull calves as fine as there are anywhere in the land that can be utilized, to meet the wants and better the conditions of farmers and dairymen in less favored districts. I want the County Agent to get busy in these counties.

I would like the County Agent of St. Lawrence County, New York, to write to the County Agent of Macon, Candler, or Coffee County, Georgia; or Baldwin, Chectaw, Clarke or Elmore County, Alabama; or Dyer, Fayette or Henderson County, Tennessee; or Craighead, Green or Jefferson County, Arkansas, or some of the southern counties of his own state and see if he cannot find a market for the surplus bull calves of St. Lawrence County.

I would like the County Agents of the State of Kansas, each one of them to pick out some County Agent in the State of Wisconsin, Michigan, Ohio, or Minnesota where they have great numbers of pure bred cattle, and work up some plan whereby each can do service to their constituents by buying or selling, as the case may be, these useful animals. There is no reason why it is not practical and possible to bring about the desired result. I undertake to say that the County Agents of the dairy states could furnish 2,000 creditable registered Holstein-Friesian bull calves, straight on the back, wedge shape, types, from good dams and good sires, that would be a credit to any scrub or grade herd, and buy them at the source of supply at a very low price indeed, when they were two weeks old. These could be crated and shipped by express to points where they were wanted, or they could be shipped in car loads and distributed in states at a very much less expense.

The trouble, as I see it, has been that the only animals that have been advertised are these from high record dams in certain popular lines of breeding and they have been sold at high prices because they represent some specialty of selective breeding. It is from these prices that the owners of scrub herds have been measuring the probable cost to them, and I want to say to you men who use scrub sires, that you are laboring under a tremendous disadvantage. The average grade of the second generation will give 50% more than the average scrub from which the generation springs, that is, if your scrub herd is averaging 4,000-lbs of milk a year or 175-lbs. of butter fat, you can increase the milk 50% and you can increase the butter fat 50% by the second generation by using pure bred dairy sires.

Another reason why scrub bulls should be done away with entirely is the necessity of raising more dairy cattle, and the evidence that is before you every day of the difference in the price of these machines when you want to buy them. Scrub cows are sold thru the dairy country at prices from $60 to $85, an extraordinary scrub might bring $100, while the grades run from $100 to $250 because of their value in producing milk and dairy products. When you go out to buy a piece of machinery you pay in proportion to what it can earn for you, and every man who is keeping a cow now on his farm owes it to himself to keep a good one, and every dairy farmer should have a pure bred sire in order to raise his own calves for his own herd, because of the difference in the cost when he goes out on the market to buy them. The difference between the value on the market of the average scrub and the average grade will pay for a pure bred registered calf two week old, and that same calf during a lifetime would create hundreds of the better grade of machinery if given the opportunity.—D. D. Aitken, President, Holstein-Friesian Association of America.

KEEP COWS WELL FED

During the hot weather of July and August the milk flow of the average herd drops down nearly half. The heat and the condition of the pastures common at that time of the year are the main causes of this drop. The flies generally blamed are of much less importance than other conditions. The real cause is the failure of the animals to eat sufficient feed. Poor pastures, heat and flies may all contribute to this result. It will be observed that during the hot weather the cows will graze but little and come to the barn at night evidently hungry. To produce three gallons of milk a day a cow has to gather at least 100 or 125 pounds of grass. If the pastures are short and the weather hot, generally this much grass will not be gathered and soon the milk flow goes down.

The influence of these summer conditions cannot be removed but may be improved. The main thing is to see that the cows do not lack food. They should be in the pasture at night and during the earliest, coolest part of the day. If the pasture is short, feed silage or green crops. It is well known to all experienced with dairy cattle that when the milk flow goes down once for lack of feed it is impossible to bring it back to where it was before by better feeding later. To get a high production of milk during the year the cow must be kept at a high level of production all the time. For this reason do not neglect the cows during the hot weather.

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HORTICULTURE

KEEPING APPLES THRU THE WINTER

How to store apples for winter use is a problem, both for the farmer and village resident. In the good old days when the houses were heated by stoves, and the cellars were fairly well ventilated and cool, yet frost proof, it was comparatively easy to keep apples until late in spring.

I well remember the cellar of my boyhood days. It had a dirt floor, and down thru the center was an open drain thru which flowed constantly a small stream of water. On one side of this drain, perhaps three feet above the cellar bottom, were the apple bins. These were a foot or more in height, and in the fall they were piled heaping full of Pippins, Baldwins, Greenings, Kings, Spitzenbergs, Russets and apples of several other varieties gathered from the home orchard.

Each night thru the long winters a panful of these apples was carried upstairs and deposited on the living room table to be eaten by members of the family, the hired man and callers from the neighboring farms. With this drain on the supply, however, there was plenty of good sound fruit left in the bins until late in the spring. The cool dirt-floored cellar with the open drain of running water was an ideal place for the keeping of apples. It seemed to supply the right atmospheric conditions for preservation of the fruit.

Under the modern system of house heating with a furnace in the cellar, cement floors and walls, the apples soon rot and are worthless. The so-called fruit room, usually separated from the main cellar by a board partition, does not solve the problem of keeping apples.

Under these conditions the best place in which to keep apples is an out-door cellar. It may be adjoining the wall of the house cellar with an opening out of doors, or constructed separately farther from the house.

In case it is impossible to construct such a cellar, these rules for keeping apples in the house cellar are given by a fruit grower who has found them very satisfactory:

Store only good sound apples that have not ripened beyond the normal point for the season. Handle the apples as carefully as you would handle eggs. A bruised apple invites rot.

Spread a thick layer of newspapers in the bottom of the barrel or box, letting the papers extend up the side. Put in a layer of apples, one tier deep. Put a course of papers over this tier of apples precisely as was put over the bottom of the barrel. Three or four thicknesses are sufficient. Put on another tier of apples, repeating the layers of paper and apple tiers until within two inches of the top of the barrel or of the top of the box. Then mat down a mass of papers tightly over the top. It is a good plan to throw a piece of burlap over the top.

Keep the fruit room as cool as possible. If the temperature can be kept around 35 degrees Fahrenheit thru the winter the apples will keep in good condition, but this is hardly possible unless extra pains are taken to keep the window open in the day above the freezing point. In the spring when the warm days come it is best to keep the window closed and hold the cold winter air, which has penetrated the cellar walls and the floor as long as possible.

Pack the late keeping varieties by themselves and store them where they will not be disturbed until wanted late in the season.

If there was a generous supply of apples in every cellar in the land, there would be more healthy, rosy-cheeked boys and girls, and fewer demands on the doctors and drug stores. Apples are Nature's own health food and medicine combined. Their culture is worthy of more attention than it now receives. There should be a small home orchard on every farm, sufficient to provide an ample summer, fall and winter supply for the farmer's family and his tenant.—E. E. R.

MARYLAND NOTES

We are accustomed to beautiful autumn weather down here in the sunny southeast corner of Maryland, but this fall Nature has done her best. This is the third day of November and not a particle of frost yet. The Cannas are in full glory and the Dahlias are failing in bloom simply because they have bloomed themselves tired. We are accustomed to getting some frost by the twentieth of October. Today the wind is from the north and it is getting cooler and another morning may show that Jack Frost has at last arrived.

The great sweet potato crop has about all been harvested. The area was larger by a thousand or more acres than usual and the yield has been fair. Crops of over 400 bushels an acre are not rare and so far as I can ascertain the average crop in this section has been about 300 bushels an acre.

The earlier shipments brought very good prices and the latest have not been unsatisfactory. The Curing houses have been paying 50 and 60 cents a five-eighths bushel basket for potatoes to store, and many new houses have been built, holding from 15,000 to 20,000 baskets each. With a yield of 400 baskets and over an acre the crops pay very well at the storage prices.

Our truck farmers have had a good and profitable season on the average. The early Irish potato crop, while not so large an interest here as in the two Virginia counties just south of us, was fairly profitable. The strawberry crop was a regular bonanza to those who had the berries. The cucumber crop paid handsomely, the small crop of tomatoes brought good prices and the canteloupes, while not high in price as an average did not mean loss.

Now the Automobile agents are happy. A friend of mine who was satisfied with a $400 runabout a few years ago soon discarded that and bought a $900 car. Now he has one for which he paid $1600, and I shall not be surprised to find him using a Limousine soon. It seems the invariable course is to start with a cheap car and then get finer and finer cars. Years ago only a few families kept a horse and carriage in town. Now there are far more cars than formerly there were buggies. To what extent the vast amount of money put into mere pleasure cars has to do with the High Cost of Living it is hard to say but it does seem that it has a great influence on the spending of money.

The prolonged growing season has been of great advantage to the late crops of Irish potatoes. The fields are still green and very few have been dug. My own crop having been planted comparatively early, ripened and have been dug, and in quality are the finest I ever raised. The market crop of these will be generally good, and a large part will be absorbed by the home market.

November being considered about the best time for setting strawberry plants here, there will probably be a larger planting than ever because of the high price last spring. The fall bearing strawberries have been and are still bearing plentiful and have been retailing at 25 cents a box. The size has been unusually small because of the very dry weather, but these late berries are far sweeter than the spring ones. As a commercial matter I am not inclined to think that the everbearing strawberries can compare in profit with the spring ones.

Everyone wants them in spring, but in the fall with its great variety of fruits, few care to buy strawberries. Then to get crops on them they have to be treated largely as an annual. Plant them in spring. Keep off the blooms till mid June and then they will make berries till frost. The next spring let them make the spring crop and then turn them under, for after they bear the spring crop the fall crop will be very small. They are more a curiosity for the home garden than a commercial crop. For market it is better to stick to the big berries that come in May.
—W. F. Massey.

SOME GOOD RESULTS WITH THE STAYMAN WINESAP

By J. P. STEWART

Last week I recommended the Stayman rather strongly for general planting, particularly in the Southern part of Pennsylvania. The following note which has come in since, offers additional evidence in favor of this variety, and some of its queries may also be of interest.

I read your article in Pennsylvania Farmer several weeks ago on "Orchard Fertilizing," which interests me very much and I wish to ask for a bit of information.

In the spring of 1912, I planted 60 Stayman trees since which time I gave them the best of care and they look good to me. In the fall of 1917 I picked 187 bushel apples from them. 1918, 176 bushel and last spring on April 28th applied 300-lb. 16 percent acid phosphate, 200 lbs. nitrate soda and 200 lbs blood (well mixed) to these trees, top dressed around them and barrowed in. The trees made a very fine growth this summer, and I have just finished picking the apples and got 362 bushel, an average of 64 bushel per tree. Had I been able to control the soab I would have had 50 bushel more. Do you consider this good from 7 year old trees?

I intend to fertilize again next spring, would you advise nitrate alone or the mixture used this spring and how much per tree?

Do you consider trade mixtures better than lime, sulphur and lead arsenate to control scab and worms? Some recommend Bordeaux for scab.
—R. A. K.

P. S.—This little orchard paid me well thus far and I intend to continue to give it the best of care. I have an account of every cent expense and receipts from it since planting time and it is almost a surprise; interesting anyhow.—R. A. K.

In my opinion, these trees have done exceptionally well. Two barrels to the tree of good Stayman Winesaps mean at least $12 to $14 net at present prices. This coming from trees in only their eighth season, and right on top of two very good crops for the age of the trees, certainly indicates both good care and a very efficient variety. I suspect that even now these trees are showing as much clear profit as any other equal area on the place, and it is a poultry farm too. I can readily see how the cash account with this orchard might easily be very interesting to the owner.

Also in the long run, I suspect that the fertilizer mixture and rate of application now being used are as nearly right as anything I could suggest, especially at this distance. The best place to determine this matter for sure, however, is right in the orchard itself. If it were my orchard, I would select the evenest bunch of trees in it, on the most uniform soil, and put fertilizer questions directly to them. Probably three or four trees in each treatment would be enough in such a case as this one, where all the trees are probably much alike.

On the first block of trees thus chosen, I would apply no fertilizer—would use it as a check in other words. On block 2, I would apply six pounds of acid phosphate to the tree. On block 3, the same weight of nitrate of soda. On block 4, I would apply about two pounds to the tree of muriate of potash. On 5, I would use both the nitrate and potash, and on 6 and the remainder of the orchard, I would use both the nitrate and phosphate for the present. Whenever this test indicated the advisability of shifting the general application to something else than the nitrate and phosphate, I would certainly do it.

If such a test were started in the present orchard, it would be remembered that all these trees were well fertilized last year and hence no marked differences in yield at least could be expected before the second year after that fertilization, and it might be even longer before important differences appeared, especially where the entire orchard is now in such good condition. It is also important to select the different blocks of trees in such a way as to avoid leaching or cross-feeding, to the greatest possible extent. For the first application, probably the best time is early in the spring, about when the buds are starting to burst, altho this point is not fully established yet. Where the applications are made annually, we may find that those made after the bloom are fully as effective as the earlier ones, and they enable one to vary the amounts applied somewhat in proportion to the amount of fruit set on the different trees, which may get more out of the fertilizer.

In the matter of controlling the scab and worms, I consider the lime-sulphur and lead arsenate combination at least as good as anything else in total effects, and since its cost is usually less than its chief competitors, it is naturally preferable. It should be remembered moreover, that the time and thoroness of the applications are likely to be more important than the exact ingredients used. Incidentally, I might say that I kept Blacktwigs practically free of scab this year, altho both the variety and season were especially favorable to it, with the above named combination alone.

In this case, the lime-sulphur was used at the rate of three gallons of the concentrate, and the lead arsenate at the rate of two and one-half pounds of the powder, to one hundred gallons of spray. In our case, the dormant application of lime-sulphur alone, at a dilution of ten gallons to a hundred of spray, was delayed until the buds had started rather freely, so the usual first scab spray—when the blossoms were in the pink, but before they had opened—was omitted. The others however, were all applied at the usual times and with especial thoroness. These times were (1) immediately after the petals of the blossoms fell, (2) about two weeks later, and (3) about the first of August. If the present trees are not too dense or too close together, these applications should do the work. If they are too dense, they may have to be thinned out a bit, but I would not prune young trees any more than is really necessary for fear of checking their bearing.

A Promising Method of Seeding Alfalfa

One of the chief reasons alfalfa is not used more, either as a hay crop or as an orchard cover, is probably due to the fact that so much time and labor has heretofore been considered necessary in preparing the seed bed and in seeding, without any other return immediately in sight except that from the alfalfa. This difficulty has apparently been largely overcome in parts of Lancaster Co. at least, and the writer had intended to try the new method out in connection with a seeding of rye as a preliminary to securing a permanent orchard cover, but was unable to get it done this fall. For the benefit of any others who may care to try it, however, we may quote the method as it was descibed to the writer by one of the extension men at State College, who has been using the method in connection with a regular rotation of general farm crops.

His statement is as follows: "Last fall I seeded twelve pounds of alfalfa seed to the acre along with the wheat, on the 3rd of October. The alfalfa seed was placed in the timothy hopper of the drill and by means of pieces of garden hose was run directly into the drill shoe. This placed the seed on the drill row with the wheat, as I figured that the wheat would protect it during the winter. As a result, I have a very successful stand of alfalfa this year."

The big advantages of this method as I see it are that it gets the alfalfa sown with a minimum of extra labor, it provides a good protection to the alfalfa thru the winter, and it affords a cutting of both wheat and alfalfa during the season immediately following the seeding, and thus practically insures a reasonable return for the labor expended, regardless of the outcome from the alfalfa.

This should be of special interest to the general farmers, but my own chief interest in it was in the possibilities which it opened for a similar seeding along with rye as an orchard cover, and especially as a practical means of transition from a tillage treatment to at least a temporary mulch and semi-permanent cover. If any of our readers should try this plan, or if they have aready had any experience with it, we shall be glad to learn of the outcome. The usual precautions of inoculating the seed and sufficient liming to insure a sweet soil for the alfalfa are doubtless necessary in this method as in all other standard methods of seeding for this crop.

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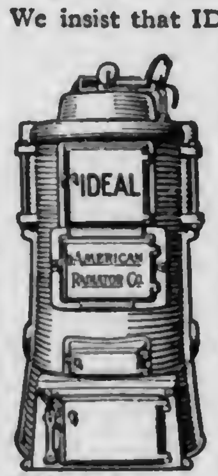

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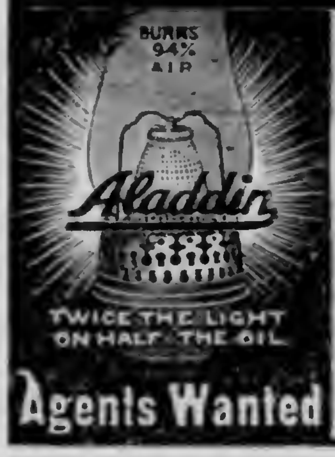

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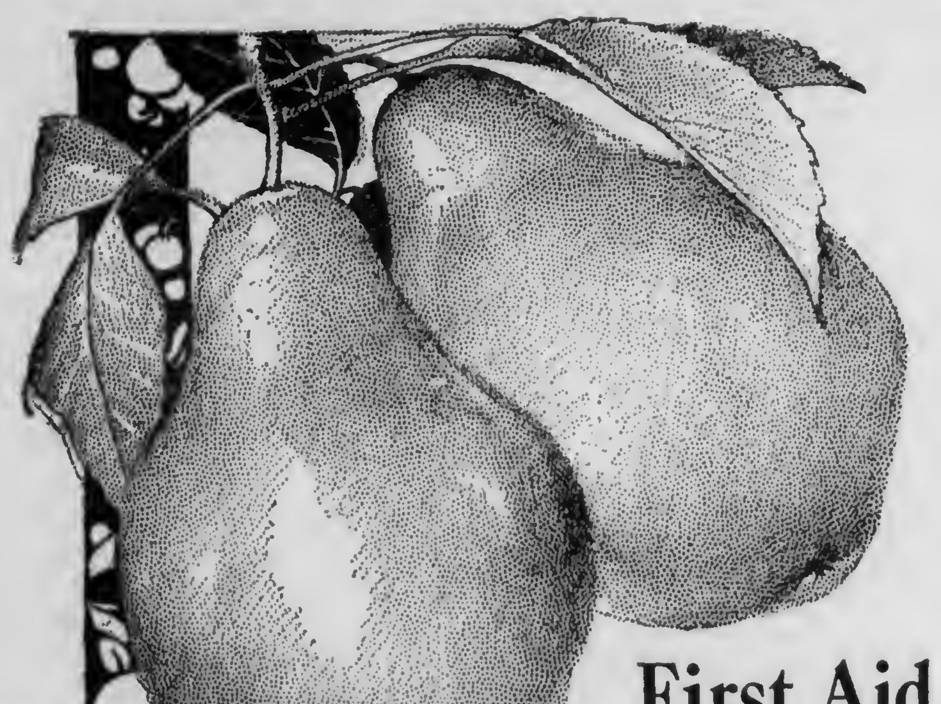

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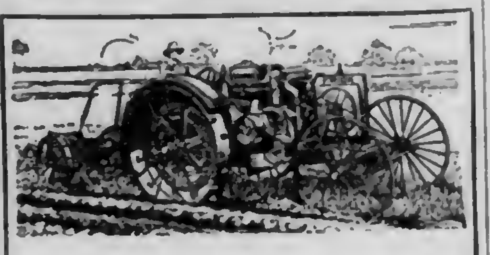

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FARM LOAN ACT CONSTITUTIONAL

Judge Arba S. Van Valkenburgh sustained the constitutionality of the farm loan act in a decision handed down October 31 in the federal court at Kansas City.

The very existence of America's new farm credits system being threatened, notable legal council was retained by all parties to the suit. Former Secretary of the Treasury William G. McAdoo appeared for the government and the joint stock land banks. Former Justice Charles Evans Hughes of the United States Supreme Court appeared for the federal land banks. Former Attorney General George W. Wickersham also appeared for the joint stock land banks. Former Solicitor General of the United States William M. Bullitt and Frank Hagerman appeared for Charles E. Smith who brought the suit to enjoin the Kansas City Title and Trust Company from purchasing bonds of the land banks, contending that the bonds were invalid by reason of having been issued without proper authority under the constitution of the United States.

Mr. McAdoo recited the story of the framing and passage of the law. Mr. Hughes and Mr. Wickersham made legal arguments as to the rightful powers of Congress to create federal land banks and to exempt their bonds from taxation.

Mr. McAdoo, who was Secretary of the Treasury at the time the law was being framed, was able to present a graphic and highly interesting account of what was intended and what was actually done. He said that to provide money and credit for all classes of farmers was almost an impossibility up to the passage of the federal farm loan act.

From the first, agriculture in America had suffered from want of money for both development and operation. Since the days of Hamilton, the government had recognized the need and had sought continuously for a remedy. However, there were four angles to the problem which made the situation one difficult to handle.

1. The very nature of banking, the safeguards which had to surround it if depositors were to be protected, made it difficult to extend to the farmer the kind of credit he could use. By reason that banks had to keep their business in such condition that depositors could get their money any time, it was impossible to make long time loans from current funds deposited with the banks. If farmers were to be given the kind of credit they needed and were to have enough time in which to work out and meet their obligations from their earnings, the money had to come from some other source.

2. Again in the very nature of things, a bank could not lend the money of depositors without ample security. In other words, those farmers which most needed money had the least to offer as security. Therefore, it became necessary to create for them a kind of credit which farmers could use to advantage.

3. The banks could not spare from their deposits enough money in the aggregate to meet the needs of agriculture. Neither could they supply enough funds to afford any considerable relief.

4. Capital could not be induced to invest in agricultural securities unless these securities were made as attractive as other securities.

Therefore, it was necessary to create a system of rural credits which should provide: Plenty of money, money on long time credit, money on liquid securities and money at a low rate of interest.

Accordingly, the government borrowed from the experience of the commercial world and from the experiences of every civilized country of Europe and sought to use in the creation of a system of rural credits everything in these experiences that was useful and adaptable.

Bond issue had made corporate finance possible. Bonds made it possible for corporations to borrow money on long time credit. Bonds also made it possible for corporations to borrow money (because of the long time investment) at low rates.

Certainly if bonds had done this for corporations they could do the same thing for agriculture.

But the certainty of double taxation presented tremendous difficulties. The land being taxed once it was unfair to tax also the mortgage on the land. Furthermore, if bonds were to be issued against farm mortgages they would have to be sold on the market in competition with tax exempt bonds of municipalities. From this it was evident that if agriculture was to be given cheap money its bonds must be exempted from taxation.

So the government developed a system of farm credits which, with tax exempt bonds as the basis, thus provided plenty of money on long time credit and at low rates.

A MARKET THAT HELPS

At Johnson City, two miles west of the city of Binghampton, a Community Market has been established. While the weather is good, the farmers stand their wagons and automobiles in a small park in the central part of the village but after the cold days come the market is housed in the municipal building.

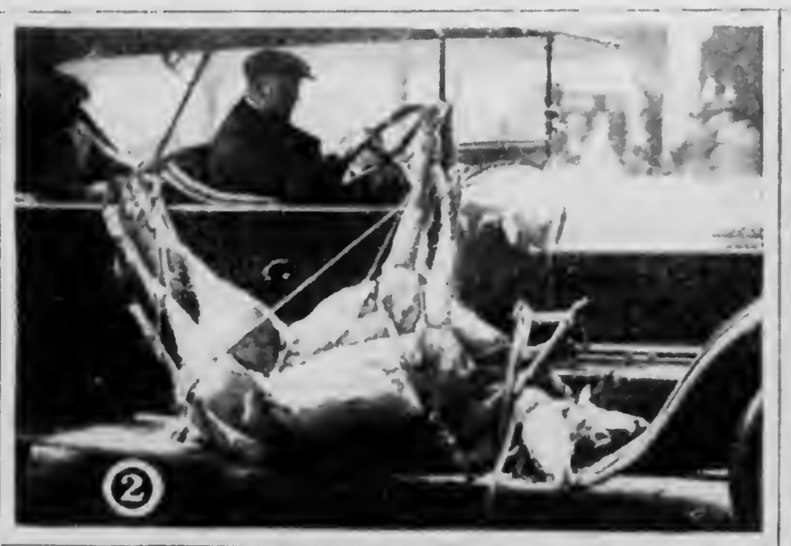
From a small beginning the market has grown until for the past ten months the sales have amounted to more than $225,000. It is estimated that by the first of January there will have been paid out to the farmers around a quarter of a million dollars, all cash, for farm produce. The value of such a market can scarcely be estimated.

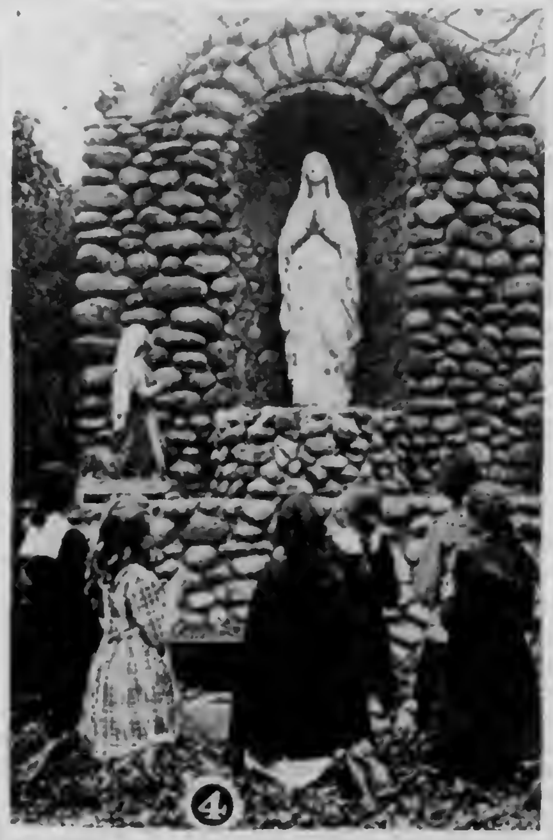
Nor is all the advantage on the side of the producers. It is a fact that thousands of dollars have been saved to those who have patronized the market. The price for goods sold is usually fixed at a little less than the same things could be bought at the local store, and still somewhat higher than would be realized by the farmers at the same stores. A Market Master is in charge and it is a part of his duty to fix prices for the day. The market is held three times a week and is constantly growing.

In connection with the market a neat little paper is published giving all kinds of interesting facts regarding the doings of the market, interspersed with bits of news and spicy things that happen to those who buy and those who sell on the market. Last week more than 1,500 copies of this paper were circulated thru the medium of the Farm Bureau and its friends. The value of the paper comes in in the fact that it forms a link between the producers and the consumers.

One of the best things about this market is the better spirit it fosters between the people of the town and the farmers outside. They get acquainted and come to look for their little chat together on market day.
—E. L. V.

PASSING EVENTS IN PICTURES





1.—King Albert and Queen Elizabeth of Belgium taking their Farewell View of America.

2.—Hunters bringing Home their Game from the Adirondacks in Auto.

3.—Sir Robert Borden, Premier of Canada, Playing his Favorite Game, Golf.

4.—Shrine to our Lady of Lourdes in South Boston, Made of Field Stone.

5.—Women of New York inspecting the City's Cold Storage Plants.

6.—Claude A. Spreckles, "Sugar King," before the Senate Committee Investigation.

7.—Charming Mexican School Girls Give Fiesta in Mexico City.

8.—Mrs. Oliver Harriman, Chairman of the Women's Council of the League of Nations.

9.—The Belgian Delegates to the International Conference in Washington.

10.—The "Acrobatic Kiss," Introduced by a Couple of Movie Stars.

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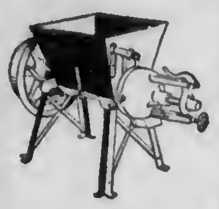

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POULTRY

MANAGING THE RABBITRY

This year there have been more inquiries than usual regarding the care of rabbits and the profit to be made from them. Several years ago rabbit meat was often difficult to sell at a profit because buyers had not been educated to use it. Now rabbit meat is offered nearly every day at the city market in our market town and many farmers make good profits on their sideline rabbit business.

Vigorous purebred breeding stock is essential. Rabbits of that kind grow more rapidly and the meat seems to be of better flavor. It gives the owner of such stock a chance to sell breeders as well as rabbit meat. The cost of starting a rabbitry is very small. Often packing boxes can be used to house the breeding does. The regulation rabbit hutches look better and they are not expensive to build.

We like a hutch six feet long, two feet wide and two feet high. One third of the length is enclosed for a nest with only small round hole as an entrance. The enclosed portion has a hinged door so the nest can be cleaned and the young rabbits examined when necessary. The remained of the hutch can have a door covered with fine mesh wire. This door extends from the nest to the end of the hutch and when opened the hutch can be cleaned quickly.

These hutches can be built with a sloping roof covered with roofing paper. Then they can be placed in the shelter of trees during the summer and even left out all winter in the protection of the other farm buildings. If rabbits have a dry, clean hutch and are well fed they can stand a great deal of cold without injury.

Often the hutches are built in sections in an open-front shed. This gives the rabbits a healthful environment and it is a little easier for the breeder to care for them in stormy weather. An old shed with a large window can sometimes be turned into a suitable rabbitry with the use of poultry wire and scrap lumber. Be sure and locate the hutches where the sunlight can strike them at some time during the day as sunshine is a wonderful disinfectant and hutches that never see the sunshine are apt to be damp and unsanitary.

When cleaning the hutches it pays to spray them thoroughly with one of the commercial coal-tar disinfectants. Rabbits seem much less susceptible to disease than poultry, but at the same time they cannot stand neglect without losses resulting. The rabbit in its natural haunts has a wide range but in confinement it spends its life on about twelve square feet of board floor. It is evident that this small range must be kept clean or the rabbit cannot thrive.

Feeding the Rabbits

Rabbits like oats, bran, clover and carrots about the best of all foods. A handful of oats morning and night will keep them healthful if a rack of hay is always provided in the hutch. A small salt box in each hutch is also necessary. Water should be provided twice each day in the summer and once in the winter Never over feed but study the rabbits and note how much of their ration they will clean up in a short time possibly about a half hour.

Rabbits will not stand neglect. The beginner is apt to forget to feed them one meal and then attempt to balance it up by heavy feeding the next time. The very hungry rabbit that overeats to make up for lost time is not as apt to remain healthy as the rabbit which is allowed its regular ration at the right time each day.

Rabbits will eat a large variety of green food including all kinds of grasses, dock, dandelions, mallows and plantain. But they seem to thrive better if some is allowed in the ration. And as the expense for the small amount of grain they need is not large, we believe that it is best to include some oats and bran in their ration. A cheap way to procure hay for the rabbits is to sweep up all the chaff that drops on the barn floor or around the mangers after the horses have been fed. We find that the cost of feeding rabbits is not so great as the cost of the time needed to gather the food and give it to them. Thus the value of a man or boy's time on the farm must be considered before going into rabbit raising on an extensive scale.

Until young rabbits are two weeks old they should not eat oats or green feed of any kind and it is best to feed the doe in a separate hutch during that time. Bread and milk is a good feed for young rabbits when they begin racing around in the hutch. They should only be fed what they will eat in a short time. Remove the balance before it becomes sour.

When the young are about eight weeks old the doe should be removed to another hutch. As the young develop they will need more room and often a room in a shed or upstairs in a barn can be used as a large rabbit run. When the young are around twelve to fifteen weeks of age it is necessary to separate the bucks from the does if they are to be sold as breeders. Outdoor runways are very healthful and desirable in raising rabbits. We have made such runways by digging a trench at the edge of the yard and filling it with stone to keep the rabbits from digging out and pests from digging in.

If a farmer is raising fruit and garden truck it must be remembered that the domestic rabbit can do about as much damage as wild rabbits and so the hutches must always be kept closed and the yards made secure. For protection a barrel or packing box should be placed in the outdoor run. In some sections it is necessary to place a wire protection over a rabbit yard because of the danger that stray dogs may kill the rabbits. It is instinct for even the best of dogs to chase rabbits and the family dog must be watched at first and taught that the rabbits belong on the farm and are not to be molested.

Hutches with wire bottoms are sometimes used in the summer to give the rabbits the benefit of the green food on the lawn or in the fields. Such hutches are moved each day and the rabbits eat off the grass that projects through the wire. They are very efficient lawn mowers and add some fertility to the grass while harvesting their rations.

Practical Breeds

The Belgian Hares, New Zealand and Reds and Flemish Giants are the most popular rabbits raised for meat. They grow rapidly and it is not difficult to obtain vigorous foundation stock in any of the above breeds. The fact that rabbits multiply rapidly makes it advisable to buy first-class foundation stock even if only one pair is purchased rather than stocking up with a large number of inferior breeders. The beginner is apt to be full of enthusiasm and anxious to see a large number of rabbits at once regardless of their quality. This often leads to buying quite a number of rabbits of several different breeds. It is better to decide which breed is liked best and then specialize in only one. After obtaining experience the breeder can take up other breeds if he wishes and posibly experiment with the Himalayans, Angoras, Checkered Giants or Black Dutch.

The increase in the price paid for furs makes another chance for profits in the rabbit business. The question, "Is there any profit in rabbits?" is like asking the same question about poultry, dairy cattle, asparagus, raspberries or wheat. Some make a profit and some do not. But we do not hesitate to say that the farm boy who likes rabbits and has the time to care for them, has a good chance to make profits on rabbits. And it is even safer than some other lines of business because the initial investment required is very small and if the business is started on a small scale and increased on the profits there will not be a chance of losing much money. The foundation stock must be good and with that to build upon there are now some unusual chances to make profits raising quality rabbits.—R. G. Kirby.

EDUCATIONAL MEETINGS AT FARM PRODUCTS SHOW

A series of educational meetings will be held at Harrisburg by the Agricultural Extension Department of the Pennsylvania State College, January 21 to 23, in connection with the annual Farm Products' Show. These meetings will be similar to the Farmers' Week which was formerly held at the College during the last week of the year. They will include lectures and demonstrations by members of the agricultural teaching staff of the College and those in the agriculture extension service. This coming year Farmers' Week at the College will be held in June instead of during the winter. Last June this plan was followed to the satisfaction of all concerned, many farmers saying they favored the summer session.

The Farm Products Show at Harrisburg is under the state Department of Agriculture in cooperation with the Pennsylvania State College. It consists of a display of all the important farm products grown in this state and a program dealing with agricultural problems and scientific farming. The educational meetings of this program are designed to answer some of the questions that have been troubling Pennsylvania farmers during the last few months.

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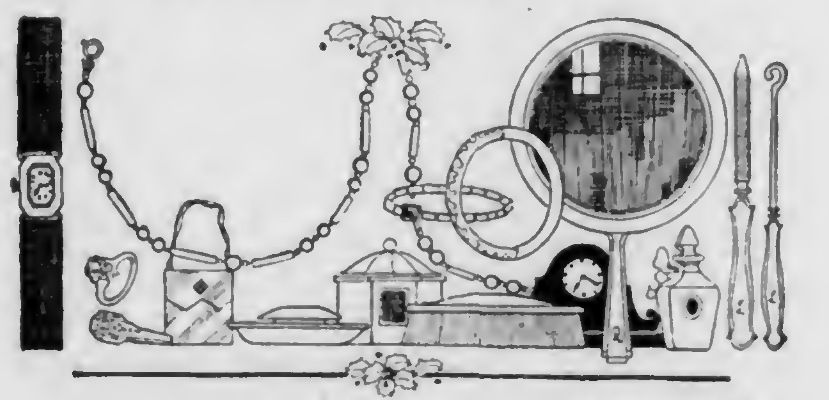

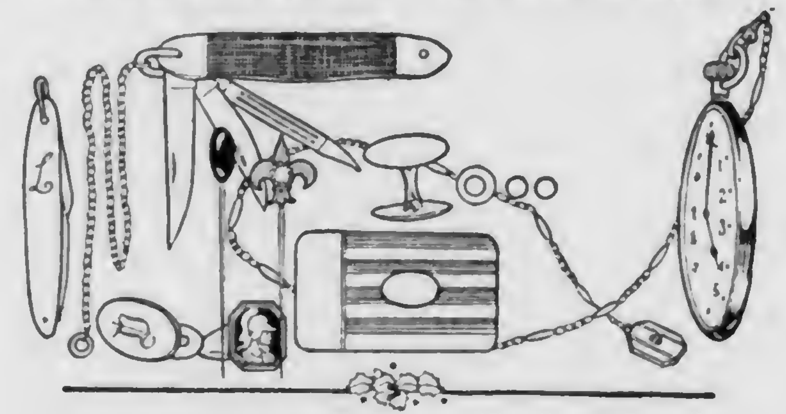

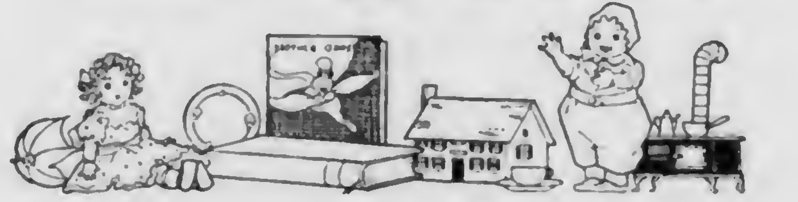

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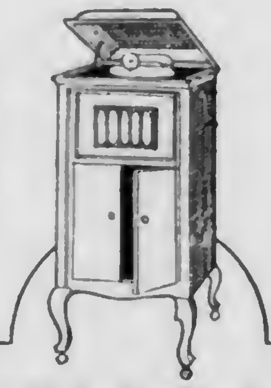

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Some Home-Made Playthings

The little child in the home, before school age, is often one of the greatest problems of the busy mother. His play is often aimless even when he is well supplied with toys. To create new forms out of ordinary material, and then by the power of the imagination transform them into things of beauty and delight is the joy of every child. The little girl's mud creations are to her real pies and cakes, while to the boy any sturdy stick that he can mount is a fiery steed.

When children can invest common things with so much charm, it seems unnecessary to buy much expensive equipment, especially when the country child is rich in so much material lying all around him. There is kindergarten material that is inexpensive and useful in giving the child the needed muscular training of its fingers, such as modeling clay, construction paper, crayons, etc. If, for any reason, this material cannot be obtained, and to supplement it if it can, I wish to point out the material to be found in home, field and woods, and to show how it can be used.

Paper as a Plaything

Every mother knows how the little child loves to tear and crumple paper. If this impulse is left undirected, it will stand for nothing in the child's life but aimlessness, or perhaps, destructiveness. Here are some of the ways it may be turned to account: Spread a large cloth on the floor and let the child sit on this as he tears paper to bits, so that it can be easily disposed of after the play is over. Pieces of wrapping paper can be used. Let the child tear this to tiny bits, and then what a realistic snow storm can be enjoyed as they are tossed into the air! This will afford amusement for a very small child and an older one as well. If the child is old enough, as soon as he tires of the play he should be taught to "shovel up the snow," and put it in a receptacle for waste paper.

Let the child also tear long strips of paper for streamers and ribbons, and when he becomes more skillful he can tear out forms of animals, plants, fruits, buildings, and even people. It is surprising what good results can be obtained from this work. A little direction at the start is all that is needed.

Freehand cutting should come next. Any plain-colored waste paper is suitable. The child can now cut some of the forms he has learned to tear. If you will tack a piece or plain-colored ingrain wall-paper on the wall in the child's room, or elsewhere, the cut-out figures can be mounted on this, and will be an incentive to careful work. Let the child copy from all the common objects around him. Representations of brooms, kettles, tables, chairs and animals are all easily done. Cut them from white paper and mount them on dark green or brown, and he can get some very artistic results.

Different days of the week can be shown by the utensils and tools used on a particular day. For Monday, wash-day, a line with clothes on it, a tub and wash-board can be cut. For Sunday, there can be a church. In this way all the different days can be portrayed.

The different seasons will call for special designs. Christmas will have bells, stockings, a Christmas tree, and if the child is quite skillful, a Santa Claus, the Wise Men, the Shepherds, and a flock of sheep can be cut. The Fourth of July should have flages, cannon and firecrackers.

Stories, too, can be illustrated by the child. The "Three Bears," will be all the more delightful if the little one has cut out the "great big bear," the "middle sized bear," the "little wee bear," and their various belongings. These are only a few suggestions that any mother can enlarge on in various ways.

What to do With Seeds

Another thing which every child likes to do is to string beads, or similar objects, on a thread. The country child has an abundance of splendid material for this work. The various vegetable seeds, such as beans, peas, corn, pumpkin and watermelon seeds, can be used in their green state or after soaking for hours in water until they are soft enough to be pierced with a needle. Several different varieties used in one chain give some very good effects. Beautiful chains can be made from the berries of the barberry, snow berry, asparagus berry, or berries from the Virginia Creeper. Small acorns are also very decorative for this purpose.

The possibilities of many of the seeds for laying in various forms are numerous. Take as round a grain of corn as possible and lay on a table. Surround this with white squash or melon seeds, and the child can make a very creditable daisy. A brown sweet-pea seed used for the center and surrounded with yellow grains of corn makes a lovely brown-eyed Susan. Other flower and fruit forms will suggest themselves as the child works. Peas can be used with toothpicks to make miniature furniture, and they are also good to help in teaching counting. Horse-chestnuts, or buck eyes, as they call them in Ohio, are loved by all children—why, the grown-up is at a loss to say. The children gather them in quantities every fall, as every mother knows. While they are green they can be strung, and are especially good for counting. The objects a child loves to handle should be associated with their number work. The buckeyes make odd-looking dolls and cunning furniture with the addition of toothpicks. For the dolls use large-sized ones for the bodies, smaller ones for the head. For the girl doll, one large, wide-spreading buckeye fastened below the body will serve for skirts, and two smaller ones will form the baggy trousers of the boy doll. Eyes, nose and mouth should be cut in the face. Toothpicks form the arms and legs. Chairs and tables will have the seats and tops made from the nuts, while the toothpicks form the legs. Backs on the chairs can also be made with the toothpicks.

Resources in Corn

Corn cobs and corn husks are both good material for play activities. The corn cobs build splendid log cabins, barns and fences. A little prepared glue will hold them permanently in place. One objection that might be brought against the cobs is the chaff that will work on the floor. If this is not desired, for indoor play half-inch or inch twigs cut to convenient length can be provided. History can be taught, incidentally, as the play proceeds, and the child will have a better idea of the homes of the early settles after he has built a cabin of this sort than he could get in any other way.

The corn husks can be shredded into one-fourth inch strips, then braided, and sewed into mats or doll hats. Charming little baskets can also be made in this way, or else woven. The husks are almost as pliable as raffia, and range thru such soft, pretty shades of cream and red that the finished work is very pretty.

The Sand Box

Every child should have a tight-fitting box filled with sand, placed on a low table or stand, where he may sit and work. Such a box has wonderful possibilities. The box should be tight enough so that the sand can be dampened with water, for dry sand will, for some of the purposes to which it will be put, be too unstable. As a help to teach geography forms to beginners it is indispensable. Lakes, rivers, mountains, islands, peninsulas and many other land forms can be made in the wet sand.

The sand, slightly dampened, and pressed to a smooth surface can be used for writing, or designs can be drawn on it with a sharp-pointed stick. Here again the colored seeds come into play, for the sand makes a good surface on which to lay them in any number of pleasing designs. A farm can be laid out in the sand that will greatly pleased the little ones. Tiny pebbles can be used for fences and walls; twigs stuck into the sand will make the orchard; while little buildings can be made from paper. These can be varied in an infinite number of ways. In fact, the children will want to imitate many scenes.

Any child will enjoy working with the materials I have mentioned, but not the least of the benefits that will result from these different forms of play is the incentive to make use of common, everyday things. It is no small thing to be taught that the material that lies all around one is full of pleasure and entertainment. —Mrs. Charles Johnston, Center County, Pa.

HINTS TO HOME SEWERS

I recently saw two suits and a straight coat of a style of three years ago transformed into stylish up-to-date models with a few changes.

The first was a navy blue French serge trimmed with rows of white pearl buttons and patch pockets on the coat. The skirt was a full three-piece one with a pleat down the front. A tailor altered the coat by cutting off the buttons and the button-holes, and binding the coat all around with black silk braid. He also pressed each side front into revers. Then the owner of the coat added a vest and a round collar of fawn-colored silk pongee, with a row down the front of plain blue buttons to match the suit.

The tailor turned the front of the skirt to the back, and pressed the inverted pleat flat. The old skirt back had fulness enough to allow a lap-over at the top front, and a row of blue buttons finished each side of the front panel, also each sleeve.

Hat to go with This Suit.—A black beaver hat of the style of ten years ago was brought out and carefully brushed and cleaned, and was found to answer very well for a hat wear with this altered suit this season. The total, outlay for this outfit was so small that the owner saved at least $25.

The other old suit was of brown chiffon broadcloth. The jacket and skirt were a little too full for the prevailing style, so the owner of this suit had a tailor remove the fullness from the skirt part of the jacket under the arms, and carefully press in a box pleat with the top ending in a point and small black buttons. The coat already had a fur collar, which was in pretty good condition after it was thoroly cleaned by rubbing bran and corn meal into the fur, then brushing it out after it had become soiled, and repeating as often as necessary to prove that all the dirt had been rubbed off of the fur. Then new fur to match was bought and a pattern was cut of paper shaped just like the old cuffs. This pattern was laid on the hide side of the new fur and the skin was cut with a sharp safety razor blade, which worked better than shears would in cutting the fur. Narrow black bias binding was sewed on all around the edge of the fur, and these cuffs were then adjusted and fastened onto the sleeves.

The fulness was removed from the sides of this suit skirt, and a pleat an inch wide was carefully pressed in on the right side. A belt was made of three narrow pieces, consisting of two front lengths lapped over a shorter piece at the back, with a black button finishing the laps. There are a few gathers across the back of the shirt at the waist.

How the Long Coat Was Fixed

The straight coat was of navy blue storm serge finished with black buttons and big patch pockets. A belt was made of black satin an inch wide. Loops were sewed to the coat under the arms, and the belt was slippd thru these loops. The buttons were removed from the patch pockets, and sewed on the belt in the center of the back; also one was sewed on the front of the belt to fasten it together. Pieces of black satin three inches wide and the length of the cuff were sewed to the cuffs in blind stitching, and two small buttons put on for finish. This black satin had formerly lined the sleeve of an overcoat.—Mrs. E. A. Kern,, Lackawanna Co., Pa.

A MENACE TO HEALTH

The use of saccharin in place of sugar, which many housewives are being tempted to resort to in these days of sugar shortage, may involve menace to the health, and therefore is to be condemned according to specialists in the Bureau of Chemistry of the United States Department of Agriculture. In most cases housewives have turned to this substance in their emergency because they do not understand that saccharin is a harmful drug; to consider it a harmless healthful substitute for sugar is absolutely false say the Government's chemists.

The Department of Agriculture has received a number of inquiries in the last few days concerning the properties of saccharin and in every case it has answered by condemning the use of the drug for cooking purposes. It calls attention to the fact that the Bureau of Chemistry is now aiding in the prosecution of a large St. Louis concern which makes saccharin, for violation of the Food and Drugs Act.

Public Warned Against Use of Saccharin

"The attempt to exploit the shortage of sugar and create a demand for saccharin for use in place of sugar endeavors to capitalize the public's lack of knowledge of the properties of this substance, and the Bureau of Chemistry feels called upon to reiterate the warnings which it has given repeatedly in its publications," said Carl L. Alsberg, chief of the bureau a subcommittee of the Senate's Committee on Agriculture a few days ago, on this same subject, as showing the extent of the present menace due to the public's not being properly informed.

"The department regards the use of saccharin in food as a menace to health," says Dr. Alsberg. "This is the position of the department today as it was in 1911, when official decisions were rendered. There has been no scientific evidence adduced on the basis of which the department would be justified in any manner in altering its position.

"The department regards food to which saccharin has been added as adulterated, since a substance has been added to the food which may render it deleterious to health. It also regards it as adulterated in that a substance of no food value whatever has been substituted for sugar, a very valuable food. The department has now pending a criminal prosecution against one concern for the shipment interstate of a parcel of saccharin labeled as harmless. Furthermore, a majority of the States prohibit the use of saccharin in food, either by statute or by regulation."

TRAINING LITTLE CITIZENS

Come, Let Us Play With Our Children

By MAUD BURNHAM

There are many mothers who are careful to supply the material wants of their children, but entirely overlook the importance of joy and happiness which are the birthright of every child; such mothers do not enter into the play life of their little ones.

The founder of the Kindergarten appeals to parents thus—"Play is not trivial, it is highly serious and of deep significance. Cultivate and foster it, oh mother; protect and guide it, oh father. To the calm, keen vision of one who truly knows human nature, the spontaneous play of the child discloses the future life of the man."

Parents who enter into the play interest of their children gain their confidence and affection. Where there is real understanding and sympathy in the home, children are not tempted to go to outsiders for amusement. It is only by taking a real interest in what the child does that we draw him to us. We can not demand entrance into his life. Parents may exact obedience, but no one can exact affection.

Happy the home where the mother plays with her children The mother who works every moment is no joy to herself nor to her family, for if she does ot become irritable she generally smothers spontaneity and happiness, nor does she ever know what it means to be the GLORIFIED mother at the end of the day.

The "glorified" mother is the one who finds recreation in having the family together after the tea things are put away. She can join in the children's games, such as drop the handkerchief, hide the thimble, conundrums, parcheesi, dominos or the simple card games such as "slap jack" and "everlasting." At other times she can read aloud the bedtime stories, but, however she may join her children in play she should find it her blessed privilege to bring harmony and reflection out of the day's experiences so that the children will feel

> "That God's in his heaven,
> All's right with the world."

Busy mothers who want suggestions on how and what to play with children will find the following books of great value. Mothers who do not care to purchase them should request that they be placed upon the shelves of the public libraries in their towns.

"Home Occupations for Little Children,' by Katherine Beebe; "A Home-made Kindergarten," by Nora A. Smith; "Volume I. Foundation Library" (a series of eleven volumns for young folks, edited by E. G. Rines Educational Society, 225 Fifth ave., New York City); "Play Life in the First Eight Years," by Luella Palmer; "A Montessori Mother," by Dorothy Canfield Fisher; "The Play Way," by Colwell Cook.

KEEPING APPLE AND GRAPE JUICES

Keeping Cider Sweet

"Please tell me the right amount of salicylic acid to put in a 50-gallon barrel of apple cider to keep it sweet. Should it be put in as cider is pressed out, and should the cider be corked or bunged up tight at once? —C. E. L., New Jersey.

The very best way to keep cider sweet is sterilize it just as for grape juice instead of putting "dope" in it to keep it from fermenting. If you destroy with heat the ferment spores that cause the trouble your cider will not only taste better but you will get the full benefit of the apple juice properties which help digestion. But if you put in salicylic acid to prevent fermentation you are introducing a preservative which will not only arrest fermentation but, because it is a preservation, will arrest digestion if the cider is taken in considerable quantities. So better not do it that way. Do it this way instead:

As soon as pressed out strain the juice thru several thicknesses of cheesecloth, and heat in enamelware kettle to not over 110 degrees, then let settle a few hours, strain again and put into jugs that have been sterilized (along with their corks) by boiling for 15 minutes submerged in the water. Then set the jugs in a big container with the water up to the jug necks, and bring the temperature up to not over 165 degrees (simmering), and keep it there 30 minutes, having the corks in very loosely. As soon as the heating ends, drive the corks at once into the jugs and seal with melted paraffin. This will make juice that will keep for years and not have any flat or cooked taste. If it is inconvenient to handle jugs this way better bottle the cider, sterilizing it in the bottles in a boiler of water with the water up to the bottle necks, and the corks in loosely.

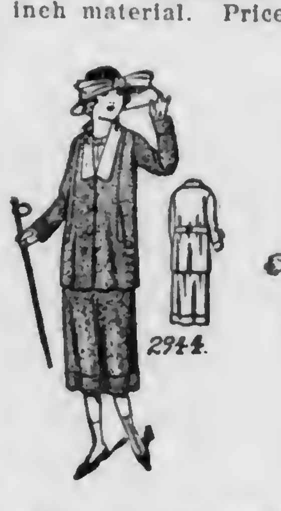
Set both the jugs and the bottles, whichever you use, on a rack to raise them off the bottom of the boiler at least an inch, so that they will not be in direct contact with the fire, and also so that the water may have a chance to circulate under the jugs and bottles the better to do the sterilizing.

Make grape juice the same way. You may press the juice from the uncooked grapes strain, heat it at once to not over 110 degrees in an open enamelware kettle, let settle a few hours, then strain again, put in sterilized bottles, set in the boiler with the water up to the bottle necks, bring to not over 165 degrees, and keep there for 30 minutes, then at once push in the corks, and seal with melted paraffin.

PENNSYLVANIA FARMER PATTERNS

Give figures and letters of each pattern exactly as printed at beginning of each description or we will not be responsible for correct filling of orders. Give bust measure when ordering waist patterns, waist measure for skirt, and age for children's patterns. Address Pennsylvania Farmer, 261 S. Third Street, Philadelphia, Pa.

2944.—Cheviot, broadcloth, serge, velour or tricotine, corduroy, and mixed suiting are all good for this suit. The coat is loose fitting. The skirt may be finished without the cuff. Brown serge with facing of tan, or blue with white, would be nice for this design. The pattern is cut in 3 sizes: 12, 14 and 16 years. Size 14 will require 6½ yards of 27-inch material. Price, 10 cents.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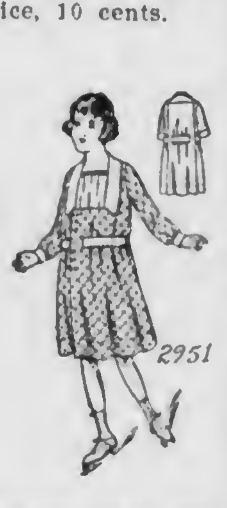
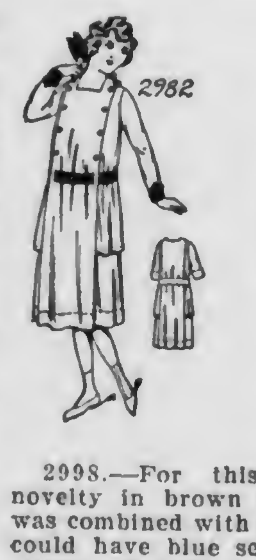

2951

2951.—Plaid gingham was used for this model, with white poplin for trimming. Plaid and plain woolen could be combined for this dress. The pattern is cut in 4 sizes: 6, 8, 10 and 12 years. Size 8 requires 3¼ yards of 36-inch material. Price, 10 cents.

2982.—This style has good lines. The tunic portions may be omitted. The sleeve may be finished in wrist or elbow length. Serge would be good for this, in blue or brown. Gingham, linen, chambrey, repp and poplin are also suitable. The pattern is cut in 4 sizes: 10, 12, 14 and 16 years. Size 12 will require 6 yards of 27-inch material. Price, 10 cents.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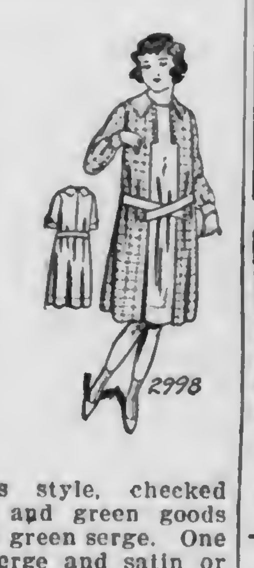
2998

2998.—For this style, checked novelty in brown and green goods was combined with green serge. One could have blue serge and satin or taffeta, or have fronts, collar, cuffs and belt, trimmed with braid. The sleeve may be in wrist length, finished with a band cuff, or in elbow length, with a shaped cuff. The pattern is cut 4 sizes: 6, 8, 10 and 12 years. Size 10 will require 2¾ yards of 44-inch material. Price, 10 cents.

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KEZIAH COFFIN

By JOSEPH C. LINCOLN

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SYNOPSIS

Keziah Coffin, a good-natured widow, is packing up to leave the fishing village to go to Boston, her brother having died and left her alone. Grace Von Horne, ward of Eben Hammond and young friend of Keziah, is assisting her. They are discussing the coming of the new minister for the "Regular" Church, to which denomination Keziah belongs. Grace is a member of the "Come-Outers," a rival set. Between the two a jealous rivalry exists. Eben Hammond calls and induces Keziah to become housekeeper for the new and single minister. She accepts and Grace goes with her to prepare the house for his coming. The new minister arrives and he and Keziah become friends at once. Keziah proceeds to make him acquainted with local conditions—especially the strained relations between the two sects. Mrs. Coffin advises him that if he wishes to steer an easy course he must recognize the "classes" of the community, and also not to fraternize with the "Come-Outers." In spite of the warning he visits the "Come-Outer" meeting one evening, is recognized and is preached at and prayed for. Grace Van Horne and the Minister meet after the meeting in a rainstorm and he sees her home. The "Packet" arrives in port, bearing Nat, the girlhood lover of Keziah.

"Oh, yes, you did," she affirmed stubbornly. "You've heard nothing good of us since you came here. Don't tell fibs, Mr. Ellery."

"But I assure you—"

"Nonsense! Does — well, does Cap'n Daniels, or his daughter, say anything good of us? Be honest, do they?"

"I hardly thing—that is, I should not call their opinions unprejudiced. And, Miss Van Horne, perhaps the prejudice isn't all on one side. What did your uncle say about Cap'n Nat's meeting me the other day?"

"Uncle Eben doesn't know. Nat didn't tell anyone but me. He doesn't boast. And uncle would be glad he helped you. As I told you before, Mr. Ellery, I'm not ashamed of my uncle. He has been so good to me that I never can repay him, never? When my own father was drowned he took me in, a little orphan that would probably have been sent to a home, and no father could be kinder or more indulgent than he has been. Anything I asked for I got, and at last I learned not to ask for too much. No self-denial on his part was too great, if he could please me. When he needed money most he said nothing to me, but insisted that I should be educated. I didn't know until afterwards of the self-sacrifice my four years at the Middleboro Academy meant to him."

The minister had listened eagerly to this defense of the man whom he had been led to consider his arch enemy. It was given with spirit and the girl's head was uplifted and her eyes flashed as she spoke. Ellery's next remark was uttered without premeditation. Really, he was thinking aloud.

"So you went away to school?" he mused. "That is why—"

"That is why I don't say 'never done nothin'' and 'be you' and 'haint neither.' Yes, thank you, that's why. I don't wonder you were surprised."

The young man blushed.

"You misunderstand me," he protested. "I didn't mean—"

"Oh! yes, you did. Not precisely that perhaps, but pretty near it. I suppose you expected me to speak like Josiah Badger or Kyan Pepper. I try not to. And I try not to say 'immejitly,' too," she added with a mischievous twinkle.

Ellery recognized the "immejitly" quotation and laughed.

"I never heard but one person say that," he observed. "And he isn't a Come-Outer."

"No, he isn't. Well, this lesson in English can't be very interesting to you, Mr. Ellery, and I must go. But I'm very glad Nat helped you the other day and that you realize the sort of man he is. And I'm glad I have had the opportunity to tell you more about Uncle Eben. I owe him so much that I ought to be glad—yes, glad and proud and happy, too, to gratify his least wish. I must! I know I must, no matter how I—What am I talking about? Mr. Ellery, I'm glad if I have helped you to understand my uncle better and why I love and respect him. If you knew him as I do, you would respect him, too. Good-by."

She was going, but the minister had something to say. He stepped forward and walked beside her.

"Just a minute, please," he urged "Miss Van Horne, I do understand, I do respect your uncle. We have a mutual friend, you and I, and thru her I have come to understand many things."

Grace turned and looked at him.

"A mutual friend " she repeated. "Oh! I know. Mrs. Coffin?"

"Yes; Mrs. Coffin. She's a good woman and a wise one.'

"She's a dear! Do you like her, too?"

"Indeed, I do."

"Has she told you about me—about uncle, I mean?"

"Yes. Why, she told me—"

He began to enumerate some of the things Keziah had told concerning the Hammond family. They were all good things, and he couldn't help seeing that the recital pleased her. So he went on to tell how his housekeeper had helped him, of her advice, of her many acts of kindness, of what he owed to her. The girl listened eagerly, asking questions, nodding confirmation, and, in her delight at hearing Keziah praised, quite forgetting her previous eagerness to end the interview. And, as he talked, he looked at her, at the red light on her hair, the shine of her eyes, like phosphorus in the curl of a wave at night, at her long lashes, and—

"Yes," said Miss Van Horne, "you were saying—"

The minister awoke with a guilty start. He realized that his sentence had broken off in the middle.

"Why! why—er—yes," he stammered. "I was saying that—that I don't know what I should have done without Mrs. Coffin. She's a treasure. Frankly, she is the only real friend I have found in Trumeet."

"I know. I feel the same way about her. She means so much to me. I love her more than anyone else in the world, except uncle, of course—and Nat. I miss her very much since—since—"

"Since I came, you mean. I'm sorry. I wish—I hate to think I am the cause which separates you two. It isn't my fault, as you know."

"Oh! I know that."

"Yes, and I object to having others choose my friends for me, people who, because of a fanatical prejudice, stand in the way of— If it wasn't for that, you might call and see Mrs. Coffin, just as you used to do."

Grace shook her head. They had moved on to the bend of the bluff, beyond the fringe of pines, and were now standing at the very edge of the high bank.

"If it wasn,t for that, you would come," asserted the minister.

"Yes, I suppose so. I should like to come. I miss my talks with Aunt Keziah more than you can imagine—now especially. But, somehow, what we want to do most seems to be what we mustn't, and what we don't like is our duty."

She said this without looking at him, and the expression on her face noticed when he first saw her standing along by the pine.

"Why don't you come?" he persisted.

"I can't, of course. You know I can't."

"Why not? If my company is objectionable I can go away when you come. If you dislike me I—"

"You know I don't dislike you personally."

"I'm awfully glad of that."

"But it's impossible. Uncle respects and is fond of Aunt Keziah, but he wouldn't hear of my visiting the parsonage."

"But don't you think your uncle might be persuaded? I'm sure he misunderstands me, just as I should him if it weren't for Mrs. Coffin—and what you've said. Don't you think if I called on him and he knew me better it might help matters I'll do it gladly. I will!"

"No, no. He wouldn't listen. And think of your own congregation."

"Confound my congregation?"

"Why, Mr. Ellery?'

She looked at him in amazement; then her lips began to curl.

"Why, Mr. Ellery?' she repeated.

The minister turned very red and drew his hand across his forehead.

"I—I don't mean that exactly," he stammered. "But I'm not a child. I have the right to exercise a man's discretion. My parish committee must understand that. They shall? If I chose to see you—Look out?

She was close to the overhanging edge of the bluff and the sod upon which she stood was bending beneath her feet. He sprang forward, caught her about the waist, and pulled her back. The sod broke and rattled down the sandy slope. She would have had a slight tumble, nothing worse, had she gone with it. There was no danger; and yet the minister was very white as he released her.

She, too, was pale for a moment, and then crimson.

"Thank you," she gasped. "I—I must go. It is late. I don't realize how late it was. I—I must go."

He did not answer, tho he tried to.

"I must go," she said hurriedly, speaking at random. "Good afternoon. Good-by. I hope you will enjoy your walk."

"I have enjoyed it." His answer was unstudied but emphatic. She recognized the emphasis.

"Will you come to see Mrs. Coffin?" he asked.

"No, no. You know I can't. Good-by. The sunset is beautiful, isn't it?"

"Beautiful, indeed."

"Yes. I—I think the sunset from this point are the finest I have ever saw. I come here every Sunday afternoon to see them."

This remark was given merely to cover embarrassment, but it had an unexpected effect.

"You do?" cried the minister. The next moment he was alone. Grace Van Horne had vanished in the gloom of the pine thickets.

It was a strange John Ellery who walked slowly back along the path, one that Keziah herself would not have recognized, to say nothing of Captain Elkanah and the parish committee. The dignified parson, with the dignified walk and calm, untroubled brow, was gone, and here was an absent-minded young fellow who stumbled blindly along, tripping over roots and dead limbs, and caring nothing, apparently, for the damage to his Sunday boots and trousers which might result from the stumbles. He saw nothing real, and heard nothing, not even the excited person who, hidden behind the bayberry bush, hailed him as he passed. It was not until this person rushed forth and seized him by the arm that he came back to the unimportant affairs of this material earth.

"Why! Why, Mr. Pepper!" he gasped. "Are you here? What do you want?"

"Am I here?" panted Kyan. "Ain't I been here for the last twenty minutes waitin' to get a chance at you? Ain't I been chasin' you from Dan to Beersheby all this dummed—excuse me—afternoon Oh, my godfreys mighty!'

"Why, what's the matter?"

"Matter? Matter enough! It's all your fault. You got me into the mess, now you git me out of it."

Usually, when Abishai addressed his clergyman, it was in a tone of humble respect far different from his present frantic assault. The Reverend John was astounded.

"What is the trouble, Mr. Pepper?" he demanded. "Behave yourself, man. What is it?"

"You—you made me do it," gurgled Kyan. "Yes, sir, 'twas you put me up to it. When you was at our house t'other day, after Laviny locked me up, you told me the way to get square was to lock her up, too. And I done it! Yes, sir, I done it when she got back from meetin' this noon. I run off and left her locked in. And—and"—he wailed, wringing his hands— "I—I ain't dast to go home sence. What'll I do?"

CHAPTER IX

In Which Miss Daniels Determined to Find Out

The hysterical Mr. Pepper doubtless expected his clergyman to be almost as much upset as he was by the new of his action. But John Ellery was provokingly calm. As a matter of fact he scarcely grasped the support of the little man's disjointed story. He had been wandering in dreamland, his head among the clouds, and the explosion of Keziah's bomb disturbed, but did not clear the air.

"What will you do?" he repeated. "Why—er—I don't know, I'm sure."

Kyan was staggered.

"You don't know?" he shouted. "You don't? Then who does, for the land sakes? Didn't you tell me to lock her up? Didn't I do it 'cause you told me? Didn't—didn't——"

He seemed to be on the verge of apoplexy. Also he had raised his voice to a yell. The minister seized him by the arm and shook him into silence.

"Hush! hush!" he commanded. "Wait a minute. Let me understand this thing. Some one is locked up, you say. Who is it- Where——"

"Who is it? Ain't I tellin' you. It's Laviny. She went into that spare room where I was t'other day and I slammed the spring lock to on her. Then I grabbed the key and run. That was afore three this afternoon; now it's 'most night and I ain't dast to go home. What'll she say when I let her out? I got to let her out, ain't I? She can't starve to death in there, can she? And you told me to do it! You did! Oh——"

The apoplectic attack was once more imminent.

"Stop it, Mr. Pepper," ordered Ellery. "I don't remember telling you to lock your sister up, though—Why, yes, I may have said something or other, as a joke, but I didn't expect you would seriously consider doing such a thing. Ha, ha! This is the most idiotic piece of business that I ever——"

"Be you laughin'?" demanded the shocked Abishai. "Laughin'? Why, my godfreys mighty! Idiotic? Well, who's the idiot? 'Tain't me! I'd never have thought of such a fool trick. But you said——'

"Hush! Let me think. Have you told anybody?"

"Told anybody! I guess not. And nobody'll never know if they wait for me to tell 'em."

"Well, then. I don't see why you can't go home and—hum—I don't like to advise your telling a lie, but you might let her infer that it was an accident. Or, if you really mean to be your own master, you can tell her you did it purposely and will do it again if she ever tries the trick on you."

"I tell her that! I tell her! O Mr. Ellery, don't talk so. You don't know Laviny; she ain't like most women. If I should tell her that she'd—I don't know's she wouldn't take and horsewhip me. Or commit suicide. She's said she would afore now if—if——"

"Nonsense! She won't do that, you needn't worry." He burst into another laugh, but checked himself, as he saw the look of absolute distress on poor Kyan's face.

"Never mind, Mr. Pepper," he said. "We'll think of some plan to smooth matters over. I'll go home with you now and we'll let her out together."

"Will you, Mr. Ellery? Will you, honest? Say, by godfreys mighty, I'd get down on my knees and thank you this minute if—if I wa'n't in such a hurry. Come right on; come quick!"

It was a silent procession of two that wended its way out of the pines and across the fields, by the brook and the pond, where the evening mists were rising and the frogs chanting their good-night song, thro the gathering twilight shades, across the main road and up to the lighthouse lane. Kyan, his mind filled with fearful forebodings, was busily trying to think of a reasonable excuse for the "accidental" imprisonment of his sister. John Ellery was thinking, also, but his thoughts were not of the Peppers.

The little house was dark and still as they approached it. No welcoming light in the dining-room windows, no open door, no shrill voice demanding to know where the wandering brother had been "all this everlastin' time." Even the hens had gone to roots. Abishai groaned.

"Oh, dear!" he wailed. "I'm scart to death. Where is she? You don't cal'late she's done it, do ye?"

"Done it? Done what?"

"Done the suicidin'. She said she would if—O Laviny!"

"Hush! Be quiet. She's all right. She's in the room where you left her, of course. She couldn't get out, could she? You've got the key. Come in."

(Continued Next Week.)

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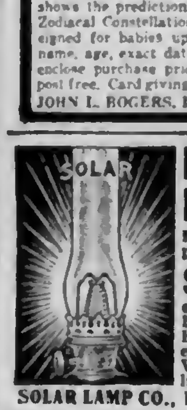

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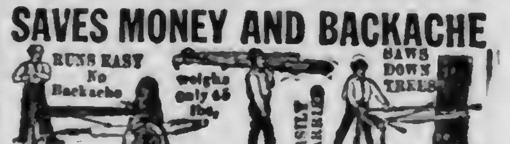

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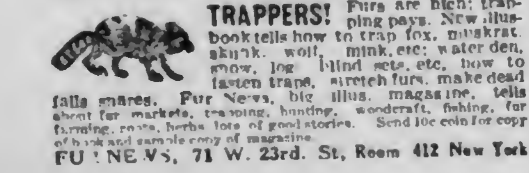
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National Grange Meeting

The greatest interest of the opening day was the annual, and the last, address of Master Wilson. It was expected by everybody that it would be a good one. And it was; and then some. The conditions of farm life and practice these days, following a sort of cleaning up job after cleaning out the old kaiser, are such that it needed a master hand to prepare and deliver a National Grange address that was over the top of all that had gone before. And it was conceded by every granger present that Master Wilson had crowned his eight years of service as Master of this great Order by delivering a wonderfully effective and complete address. He spoke in part, as follows:

"If all the money spent during the last twenty-five years in the United States for propaganda work, in the name of agriculture, had been devoted to building good roads between the farm and its market town; to extending rural mail service to thousands more of homes; substituting a system of reliable crop reports for the present worthless and misleading guess work; to creating efficient marketing bureaus that do more than simply theorize on the great problem of economical and business-like distribution of food—if this had been done, we might have gotten somewhere on "the high cost of living" problem, so-called, with advantage to both consumer and producer. To start right in interpreting the food problem of the times, by getting to the very bottom of the facts, is one of the country's most imperative needs.

"Taxation lies at the base of much of the present-day trouble," Mr. Wilson said, and he suggested as an equalization of the burden that the cities where wealth and population are centered should bear a large proportion, especially for the maintenance of roads and schools.

"One of the imperative necessities of today is the putting of emphasis upon the sacred rights of property, as opposed to the wild orgy of radicalism, nationalism and anarchy which is sweeping the land and threatening to destroy every industry, every farm and every home. There can be no other end to present tendencies, if they remain unchecked and might as well be faced first as last, and there should be no further trifling in the matter. The right to individual property ownership, honestly accumulated and legitimately conserved, has always been a fundamental American principle. That principle is now being savagely attacked from a variety of angles and it seems incredible that the American people as a whole have not yet awakened to this supreme danger which underlies all the upheavals we are now witnessing in this country.

"Underlying a very large percentage of our national troubles is the fact that too many people are in America who are not a part of America and never intend to be if they can help it. Our world-wide welcome of the past, and our failure to foresee and forestall its dangers, has filled our land with a class of people who have no conception of what liberty means, no respect for law and no regard for either individual or collective rights. Only a strong code of immigration laws and a new policy in handling the alien question can save the United States from destruction, and each day's delay in acting menaces every institution we hold dear. There are thousands in this country whose acts merit immediate deportation and would be deported if a government and a people were awake to their peril.

From the opening of the first session professional lobbyists have been numerous and busy in the lobby of the Pantlind Hotel. Each one is working for something and tries to buttonhole one of the sixty-six men and women who have the final vote on the many motions and resolutions to be considered during the coming week.

We can clearly see how all Michigan Granges feel on the plan proposed by Gompers for the Grange to join hand in hand with the American Federation of Labor. Everyone is "agin" it—there seem to be a few from the western states who mildly favor trying it out.

The Grange favors the national good roads bill, but takes the stand that the roads are the public's problem rather than the farmer's individual problem. There was considerable disappointment because Senator Townsend could not be present Thursday to talk on his bill.

At the evening public meeting of the first day the entire audience showed unanimous approval of A. H. Vandenburg's address on national affairs. He referred to the present condition of this country and the need of quick action to knock out the reds and all of their ilk. It is very evident at this National Grange session that the farmers of the country would make short and quick work on a clean-up job of a lot of men and women who are staying here to destroy all they can before they make a quick get-a-way.

FARM BUREAUS FEDERATE

An American Farm Bureau Federation will be the result of a rousing meeting of 350 farmers at Chicago, November 12-13-14. These men were delegates from Farm Bureau Organizations in 33 states, called by a National Organization committee as a result of a similar meeting at Ithaca, February 14, 1919.

The meeting organized by voting to continue the National Organization committee in charge of the conference. O. E. Bradfute of Ohio, acted as chairman, Frank M. Smith of New York, Secretary and Chester Gray of Missouri as Floor Leader for the Organization Committee.

President J. R. Howard of Clemons, Iowa, speaking for the western farmers drew forth applause with the declaration that "The American Farmer has no quarrel or alliance with other groups or classes, but stands squarely on the platform that every man shall render an honest day's labor for an honest day's pay." He made a careful analysis of the changed economic conditions under which agriculture is now working, and told how the Farm Bureaus had served to widen the interests of farmers and put them in contact with the whole world.

Representation in the National organization was the basis of considerable discussion between the smaller and larger membership states. The decision finally reached permits one director from each state with an additional director for each 20,000 members.

The next big point of difference, the membership fee, proved a hard proposition to settle. The Middle Western states with their high Farm Bureau Association membership fee of from $5.00 to $15.00 and with their plan of paid organizers and high salaries fought for a large national budget. The opposition developed from the Eastern states which pay only the County Agents, depending on volunteer farmers service for the solicitation of membership, etc., and by those states, including many in the South which have a state organization and no county membership fee. They could not see their way clear to become members of the National Federation on anything like the basis proposed by the Middle West. After considerable debate the matter was finally compromised on the basis that each state pay a membership fee in the National Organization of ten percent of the individual farmer's membership fee in the County Organization, and that states not having a County membership fee should pay a National fee of from $250.00 to $1,000.00—the amount to be decided by the Executive Committee.

With the big points of difference in the constitution decided upon, agreement on minor details was easily reached. On the question of starting the organization, it was voted that the ratification of the constitution by ten states would constitute the final act which would bring the Federation into existence. At this point the question was raised by some of the delegates as to how the organization would be carried along until the ratification by the tenth state. The Middle-western States took the position that the sooner the tenth state ratified, the better, and that immediately upon the ratification by the tenth state the organization meeting should be called. However, it was recommended that such meeting should not be held prior to March 5, 1920. This solution of the problem was not at all pleasing to the more aggressive states, particularly those which desired that the new organization should begin to function immediately. The decision of the delegates stood however.

Reasserting its primary purpose of strengthening and promoting the work of county farm bureaus and their supporting county and state associations, in ringing resolutions the convention also declared for loyalty to American institutions, against any affiliation with organized labor, recognized the farmer's responsibility for the stewardship of the land and his obligation to maintain soil fertility, commended the work of agricultural colleges and the economic, farm management and crop estimating work of the United States Department of Agriculture, and vigorously asserted the farmer's right to the costs of production.

On October 31, 1919, there were operating in the United States 3,862 Farm Loan Association. The total mortgages loans made by the Federal Land Banks thru these associations, October 31, 1919, to 103,672 farmer-borrowers, amounted to $271,317,816. During October 8,738 applications were received asking for $31,215,113. During the same period 6,149 loans were approved, amounting to $20,332,042. Altogether 227,943 farmers have applied for loans under this system, in the aggregate amount of $636,790,814. Up to October 31, 1919, interest and amortization payments due by borrowers to the Banks amounted to $13,848,304,28.

Declarations of the National Grange

Subjects Upon Which the Late Session Declared Itself

The National Grange at its annual meeting held in Grand Rapids, Mich., November 12-21, was occupied with some of the big questions of the day. The following are some of the final judgments of the body:

The Grange on Nationalization

By considerable majorities the National Grange opposed nationalization of railroads, government retention of the war shipping acquired during the war, and all such communistic schemes, feeling them fundamentally inimical to that individual and collective initiative and energy that has made the American nation the resourceful giant that it is, in all lines of achievement.

Regarding the "nationalization" schemes of certain labor unions (and a Northwest state had the nerve to ask the Grange to endorse the Plumb railroad plan), the Grange's position is this. "In the government of free democracy is lodged ample power to curb the evils of the power of swollen fortunes in the hands of the unscrupulous. We oppose government ownership and 'nationalization' of business and industry unles clearly required for public interest."

Specific recommendation regarding railroads and ships was: Approval of the general principles of pending legislation to restore railroads to owners, with an actual value capitalization, under a control commission empowered to protect public interest against railroad owners' injustice; also sale of present government-owned ships to private owners at proper prices, and government control of such privately managed merchant marine. Endorsement of state ownership of coal mines as proposed by Colorado State Master, John Morris, was turned down.

The Grange favors "safeguarding every right of private property on the broad ground that only by the full development of the right of private property can there be prepetuated the full measure of individual initiative and emulation in which a democracy is based and by which its future is assured. 'The rule of the majority, expresed thru the ballot box, in orderly government' was another pronouncement of Grange sentiment. 'There is no room in our order for the ideas or methods of foreign radicalism or of aristocracy' was another emphatically endorsed shot at the communistic propaganda of certain elements among us.'"

Industrial Controversies

The proposition of the Federation of Labor to have the Grange confer with it at Washington, December 13, was carefully considered and politely reclined, the great proponderance of feeling being that until labor changes its inclination from too much class selfishness to better consideration for public welfare, farmers have little in common with its aims, and that only public misconception of the Grange and consequent alienation of a large part of its membership could come out of any such conference.

The Grange warns that "if industrial controversies are settled by increasing industrial wages and decreasing industrial hours of labor, farmers must not be held responsible for the resulting increases in the cost of the necessities of life." The Grange demands that the complaint against high prices be directed where they are caused, i. e., to the cost of labor, profits in food distribution, and high cost of things the farmer has to buy. Imprisonment of as well as fining convicted profiteers was suggested. "Quit howling, get to work and be economical" is the Grange's advice to labor as the quickest method of adjusting income to prices. Endorsement of the budget plan for governmental expenditures was unanimous.

Production and Distribution

These two factors afforded some of the most interesting debates of the sessions, some division hinging on whether the farmer has any responsibility in distribution. The debate was precipitated by this wording in one of the first drafts of the declaration of principles. "Production and distribution are distinct functions. In large part distribution is not the farmers' problem, and efforts of farmers toward reducing final selling prices of their produce are misdirected." There was so much opposition to this wording that the proposition was sent back to committee for redrafting so as not to be contrary to claim for the right of farmers to co-operate for better marketing and distribution of their products. To protect and develop this right, the Grange urges passage of the Capper-Hersman bill, now pending in Congress, which would specifically establish the legality of collective bargaining by farmers in marketing their products. And government control of corporations must be maintained to prevent extortion and discrimination. However, government price-fixing in peace time is indefensible, in Grange opinion.

Taxation and Land Bank Accommodation

Reaffirming its stand for uniform tax rates on actual values, the Grange opposed taxing land bank bonds for fear that this will increase interest rates to borrowers. Better accommodation by land banks thru direct dealing where there are no local farm loan organization was urged. Adequate and fair income inheritance taxes were urged.

Soldiers' Compensation

There was lively division between the Northwest and the major part of other Grange states on method of compensation for our World War veterans. The proposition supported by Washington, Oregan and Colorado masters, to pay every veteran $50 per month (that's the way it was worded, no time limit being named) was tabled and a substitute by Lowell of New York adopted to this effect: "We recommend adequate financial remuneration and honors for our World War veterans, both men and women, and have confidence that Congres will carry this out."

Foreigners

The Grange would admit to the U. S. only immigrants who declare their intention of becoming citizens, and would deport all foreigners not naturalized by a stated period, and all whether naturalized or not who will not obey our laws or respect our institutions.

Mail Service and Roads

Restoration of rural routes abandoned during the war, a practicable mileage for each route and extension of the service are demanded. Postal zone rates were condemnd as detrimental to the service. Special local rates for library books are wanted by Grangers. The Grange wants an aggressive permanent road construction policy.

Military Policy

The Grange reaffirmed its opposition to a large standing army and to universal military training, but conceded something to the benefits of military discipline by favoring adequate methods of physical training in our schools.

Rural Schools

The Grange home economics committee proposed, and the Grange approved, that a fair percentage of the several million dollars proposed to be appropriated for rural schools under the Smith bill pending in Congress be used for trained special teachers in home economies for one-room rural schools. An extension of adequate training in agriculture is also urged.

Woman Suffrage, Prohibition and Cigarettes

The Grange will urge all states that have not ratified the federal suffrage amendment to do so as soon as possible. It will also help to secure and make effective adequate prohibition enforcement laws, and urges creation of sentiment against the fast growing cigarette habit.

Agricultural Representation

Arguing that about one-third of the population and over one-fourth of the wealth of the country is agricultural, the Grange insists that agriculture must have far greater representation than heretofore in councils for shaping government policies. It demands that the secretary of agriculture be a practical actual farmer, thoroly identified with farm interests, a man whom farmers know as one of them.

Oleo, Feed, Packers

Prohibition of coloring oleo in imitation of butter will be the persistent aim of Grangers. Also more explicit labeling of feeds, fertilizers and insecticides. Government registration and control of the meat packing business in the interest of the public will be urged by the Grange.

Farm Organizations Federation

One of the most interesting debates was on the invitation of the National Board of Farm Organizations to the National Grange to make its headquarters in the Farm Organizations building in Washington and to take membership in the Board. Grangers did not object so much to having National Grange headquarters in the Board building but there was lively opposition to taking membership in the Board for fear of subordinating the Grange to this board. As the original and foster organization of various farm organizations, the Grange prefers to remain free to co-operate, rather than federate and thus perhaps endanger its identity and independence by tying up with other organizations in any way that renders the future status of the Grange uncertain.

Increase Grange Dues

To provide for the more aggresive program that the Grange must develop to properly safeguard agriculture and develop farmers' organization, the minimum of annual dues to National Grange from state Granges per member was raised from five cents to eight cents.

GET TOGETHER

Here is something to set farmers to thinking. A farmer of Wayne county delivered his wool at the factory and received 65 cents a pound for it. He bought some yarn for which he paid $4 a pound, or six times as much as he received for the wool. Then he bought a suit of clothes for $40, which he weighed and found it weighed 4 pounds. The wool in the suit cost $2.60 and he is wondering who got the other $37.40 which is fifteen times as much as the wool brought.

How long are we farmers going to stand this sort of a deal and keep on producing wool? Ninety per cent. of the farmers are American, yet they are denied the privileges granted to foreign laborers. The farmers feeds the world and is entitled to a square deal, but instead the majority of city dwellers have a contempt for the agricultural classes because they have been too docile. They have been enjoying the cream of our labor and we have been given given a diet of very thin skimmed milk. It is time we did more head work and less hard work. Let us take a half-day each week and get together and go over the situation and see if it is not posible to discover a remedy for it.—C. D. H., Wayne Co., Pa.

LESS WHEAT MOVED FROM FARMS

Wheat receipts from farms for the week ended November 7 amounted to 15,460,000 bushels, a decrease of 3,359,000 bushels from the previous week, according to the United States Grain Corporation. In the corresponding week in 1918 the receipts were 13,673,000 bushels.

Production of flour for the week totaled 3,209,000 barrels, a decrease from the previous week of 131,000 barrels, but an increase over the like week last year of 1,015,000 barrels.

In the period from June 27 to November 7, 569,282,000 bushels of wheat were received from farms and 32,433,000 barrels of flour were produced. From July 1 to November 7 exports of wheat and flour equaled 87,020,000 bushels, comprising 59,327,000 bushels of wheat and 6,154,000 barrels of flour. Exports for the corresponding period last year totaled 94,741,000 bushels.

Markets

LANCASTER PRODUCE MARKETS

Lancaster, Pa., Nov. 24, 1919.

Despite reports of shorp jumps in egg quotations in other cities, markets here this morning were well stocked with eggs at 80 cents a dozen, the average ruling price for the past month. Turkeys made their appearance at 55 cents per pound dressed, with higher prices expected to prevail later for the Thanksgiving trade. Business was brisk and prices firm.

Butter and Eggs.—Creamery butter, 75@80c lb.; country butter, 80c; fresh eggs, 80c doz.; duck eggs, 60c; goose eggs, 10c each.

Poultry.—Dressed old chickens, $1.25@$1.75 each; dressed young chickens, 85c@$1.30 each; dressed turkeys, 55c lb.; no live fowls offered.

Vegetables.—Spinach, 20c ½ pk.; oyster plant, 8c bunch; lettuce, 25@30c per head; lima beans, 20c qt.; cauliflower, 10@15c head; cabbage, 5@10c head; sweet potatoes, 35c pk.; potatoes, $1.65@1.75 bu.; do., 25@30c ½ pk.; turnips, 15c ½ pk.

Fruit.—Apples, 40@50c ½ pk.; pears, 20@25 ½ pk.

Grain Market.—Wheat, $2.20 bu.; rye, $1.60; corn, $1.05; oats, 75c; Timothy hay, $28 ton; mixed hay, $26; wheat straw, $11; oat straw, $10.

BALTIMORE PRODUCE

Baltimore, Md., Nov. 24, 1919.

Butter.—Creamery, western fancy, 72@73c; choice, 70@71c pound prints, 73@74c. Nearby rolls, 46@47c; Dairy prints, 49@50c.

Eggs.—State, Pennsylvania and nearby, 70c. Eastern Shore and Virginia, 70c. Southern, 66@67c.

Live Poultry.—Springers, 26c pound; old roosters, 20@21c; old hens, 26c lb.; ducks young; 26@28c; do., poor, 24@25c; guinea fowls, 90c@$1.00.

Grains.—Bag lots by sample, $2.18@2.32, wheat, new, No. 1 red, $2.30 do., No. 3, $2.62; garlicky, $2.13; Corn, $1.65; Oats, standard white, 80@81c; Rye, nearby, $1@1.50.

Hay.—No. 1 timothy, $31.50 ton; do., standard, $30.50 ton; light clover, mixed, $29@30 ton, Clover, mixed, $28@29. Tangled rye straw, $14.50. Wheat straw, $12@13. Oat straw, $14@15 ton.

Western Spring Bran, per ton, in 100-pound sacks, $42@43; City Mills Winter Bran, per ton, in 100-pound sacks, $50; brown middlings, per ton, in 100-pound sacks, $55; white middlings, per ton, in 80-pound sacks, $67. Quotations on City Mills feeds are jobbing prices.

NEW YORK PRODUCE

New York, Nov. 22, 1919.

Butter, firm; receipts, 5676 tubs; creamery higher than extras, 73½@74c; extra 92 score, 73c; firsts, 63@72c; packing stock, current make, No. 2, 50@50½c.

Eggs, firm; receipts, 7443 cases; fresh-gathered extras, 80@81c; do., extra firsts, 77@79c; do., firsts, 72@76c; state, Pennsylvania and nearby western hennery, white, fine and fancy, 98c@$1; do., nearby hennery white, ordinary to prime, 75@97c; do., brown, 85@90c; do., gathered brown and mixed colors, 80@81c.

Cheese, steady; receipts, 1271 boxes; state whole-milk flats, current make specials, 31½@33c; do., average run, 31¾@32¼c; state whole milk twins, current make specials, 31½@32c; do., average run, 31c.

Poultry, live steady; chickens, 21@24c; fowls, 18@30c; roosters, 20c; turkeys, 38@40c.

Vegetables.—Potatoes, Long Island, $5.25@5.75 per 165-lb. bag; Jersey No. 1, $3.50@4.75 bag; Beans, green, $2@5 basket; Beets, $2@2.50 per barrel; Carrots, $2@3 per bbl; Cabbage $3@8 per 100; Lettuce, $1@3 basket.

Fruit.—Apples, McIntosh, $5@10; Baldwin, $4@7.50; Northern Spy, $4@9.

PHILADELPHIA LIVE STOCK

Philadelphia, Pa., Nov., 24, 1919.

Receipts of live stock for week ending November 22 were as follows:

	Beef Cattle	Sheep and Lambs	Hogs
Total for Week	3,032	8,653	10,294
Previous Week	2,180	8,545	9,693

Calves.—Receipts of calves last week were 1,383 head against 1,077 head week previous.

Beef Cattle.—The market for steers was dull and lower, with more liberal offerings. Other kinds were in moderate supply and demand at unchanged prices. Steers, good to choice, $15@16.50; do., fair to good, $13@15; common to fair, $11.50@13; cows, fat, per pound, good to choice, corn fed 9½@11c fair to good, 7½@9½c; do., common to fair, 4½@7½c; calves, extra choice, $20@21; fair to good, $18@20; common, $12.50@16.50; heavy, $8.50@12.50; Tennessee, choice, $16@17.50; other southern, $9@13.

Sheep and Lambs.—Sheep ruled steady under moderate offerings and a fair demand. Lambs of fine quality ruled firm and higher under light offerings and a fair demand. Sheared sheep, wethers, extra, $10.50@11; good to choice, $9@10; medium, $7@8; common, $3.50@5; ewes, fat, heavy, $7.50@8; spring lambs, choice $15@15.25; medium, $12.50@14; culls and common, $10@11.50.

Hogs.—Demand was fair for fine stock, but the market ruled weak and lower due to freer arrivals and easier outside advices. Quotations for best western, $16.50@17; nearby, good, $14.50@15.

City Dressed Stock.—Trade in steers, heifers and cows was quiet, but offerings were only moderate and values were steadily maintained. Lambs ruled firm and slightly higher with demand fair for fine stock. Hogs were more freely offered and easier. Other kinds were in moderate supply and demand, with little change in prices. Quotations: Steers, 20@26c; heifers, 15@20c; cows, 13@18c; calves, city dressed, choice, 22@26c; country dressed, 20@24c; sheep, 12@18c; lambs, spring, 23@26c; hogs, 22c.

LIVESTOCK

Pittsburgh.—Cattle—Steady; supply light; prime $15@15.50. Sheep—Steady, supply light; prime wethers, $9.50@10.25; culls and common, $3@4; lambs, $9@14.50; veal calves, $18@19. Hogs—Lower; supply 30 double decks; prime heavies, $14@14.10; mediums, heavy Yorkers, light Yorkers and pigs, $14.25@14.35; roughs, $10@12.

PHILADELPHIA HAY AND GRAIN

Philadelphia, Pa., Nov. 24, 1919.

Baled Hay and Straw.—Receipts, 216 tons of hay. Market firm. Timothy hay, No. 1, $33; do., No. 2, $29@31; do., No. 3, $27@28. Clover-mixed hay, light mixed, $29@31; do., No. 1 mixed, $27@28. Straw—No. 1 straight rye, $15@15.50 do., No. 2, $13@13.50; do., No. 1 tangled rye, $14; do. No. 2, $12.50@13; do., No. 1 wheat straw, $13.50@14; do., No. 2, $12.50@13; do., No 1, oat straw, $14.50@15; do., No. 2, $12.50@13.

Bran.—Quiet but steady. We quote: Car lots, to arrive, including sacks. Soft winter bran, western, in 100-lb. sacks, per ton, $45.50@46.50; spring bran, in 100-lb. sacks, per ton, $44.50@45.50.

Corn.—No. 2, yellow, $1.68@1.69.

Oats.—No. 2, white, 82½@83c; No. 3, 81½@82c.

NEW YORK HAY AND GRAIN

New York City, Nov. 24, 1919.

Feed.—The market for mill feed showed a steady undertone but the volume of business was extremely small. Buyers of late have been every indifferent about making purchases and this has had a tendency to undermine confidence to some extent, altho sellers have not been disposed to make further concessions.

Quotations: City feed, bran, $45; middlings, $54, in 100-pound sacks; red dog, $69, nominal, 100-pound sacks; Western spring bran, $44; standard middling, $47@$48; flour middlings, $57@58; red dog, $68, all in 100-pound sacks, 30-day shipment Oat feed, $28.50; rye middlings, $48; white hominy feed, nominal, all in 100-pound sacks. Cottonseed oil meal, $80.50; linseed oil meal, $80, in 100-pound sacks.

Hay and Straw.—At 33d street shed market is quiet and values unchanged. A river barge arrived yesterday morning and selling slowly from $33 down, according to quality. In Brooklyn, market is very quiet and steady at Brooklyn Eastern District Terminal, but at Bushwick station we hear of one or two cars of really choice hay reaching $35, which is impossible at any other harbor point. Rye straw quiet, with bulk of sales at $14. Oat straw steady.

Hay.—No. 1 large bales, $34 ton. No. 2, $32@33 ton; No. 3, $29@30; shipping, $27@29 ton. Fancy light clover mixed, $33 ton. Clover, No. 1, mixed, $31.

Straw.—Per ton, No. 1 rye, $14@15; No. 1, oat, $15.

Wheat.—No. 2 red, $2.37½.

Corn.—No. 2 yellow, $1.66¼; No. 3, yellow, $1.55½.

Oats.—No. 2 white, 82½c; No. 3 white, 82c.

Rye.—Export, $1.57½.

Buckwheat.—Milling, $2.95@3 per 100 pounds.

PITTSBURGH HAY AND GRAIN

Pittsburgh, Pa., Nov. 24, 1919.

Hay.—No. 1 timothy, $30@30.50; No. 2, $28@29; No. 3, $25@26; No. 1 light mixed, $28@29; No. 1 clover mixed, $30@31. New No. 2 clover mixed, $25@28.

Straw.—Receipts are beginning to run extremely light while the demand is getting better but not urgent. Market lokking higher.

No. 1 oat, $12.25@12.75; No. 2, $12@12.50; No. 1 wheat, $12.25@12.75; No. 2, $11.75@12.25; No. 1 rye, $13@13.50; No. 2, $12.50@13.

Ear Corn.—Receipts and demand are both light, not much trading, buyers anticipating lower market. New No. 2 ear corn offered at $1.30 per bushel.

Oats.—Demand better for oats with light receipts. Trading good. No. 1 white, 80@81c; No. 2, 79@80c; No. 3, white 79c.

PHILADELPHIA DAIRY MARKET

Philadelphia, Pa., Nov. 24, 1919.

Butter.—Receipts, 2110 tubs. The market was quiet but firm. The Produce Exchange was closed, and there was little wholesale trading on the street. Fresh, solid-packed creamery, fancy, high-scoring goods, 73½@75½c., the latter for jobbing sales; extra, 72½c; extra firsts, 67@70c; firsts, 60@63c; seconds, 57@59c; thirds, 55@56c; sweet creamery, choice and fancy, 74½@76½c; do., fair to good, 63½@71½c; ladle-packed, as to quality, 50@52c; packing stock, 47@49c; fancy brands of nearby prints, jobbing at 79@81c; good to choice, 68@78c; fair, 64@66c.

Cheese ruled steady, but demand was only moderate. New York whole-milk flats, fancy, 33c; fair to good, 31½@32½c; Wisconsin whole-milk flats, fancy, 33c; fair to good, 31@32c; jobbing sales of fancy goods, 34@35.

TOBACCO MARKET

Thirty-five to fifty per cent. of the Pennsylvania tobacco crop has been sold. The long continued dead lock has been broken and growers have realized in their determination to have fair prices for their tobacco. Evidently the influence of organization has been felt and from now on tobacco raisers may control their output to a great extent. The situation, altho less spectacular, may be compared to that of the early section when after a period of unfair prices growers were driven to action since which time no similar attempts have been made. Representative prices for crop lots were as follows: In one locality $17.50 to $20 per cwt.; then in another $16 and 6 to 20; another $17@18 and in others prices ranged as high as $20 to 23 for the better offerings. Upon the average, wrapper grades sold at $16 to 21 per cwt. and fillers at $6 to 7. Many are holding for higher prices and believe that the changes for same were never better. However, it is often good policy to get in while the sledding is good. The accomplishment of a local selling organization with reference to the old crop was shown by a recent acount of the sale of 600 cases at from $20 to 23.50 per cwt. It is stated that a ten per cent dividend has been declared and that patrons have been given a rebate of one-half cent per pound. It has been said that to keep the situation hand the growers need no noise, brass bands or parades but just plain, common sense, keeping close to the earth like other successful businessmen. It should be remembered that the selling end of tobacco production is more in need of attention than is the growing end

MARTIN'S TANKAGE
Produces the Big Ones

It takes just as much time to feed good, wholesome tankage as it does the poor kind. And it costs *less* in the end. You can always depend on Martin's Tankage. Only the best of meat scraps, carefully sterilized, are used. Sold with a guarantee. Write for feeding directions and prices.

D. B. MARTIN CO.
36th and Grays Ferry Ave., PHILA.

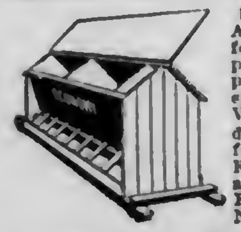
WANTED—

Single men to work in large modern dairy barn. 350 head registered Holsteins. Must be good dry hand milkers. Wages $60 per month and board.

We might also use one or two experienced men to feed and milk cows on official test. Wages for this work depending upon experience and ability.

Write stating age and experience also give reference.

WINTERTHUR FARMS, Winterthur, Del.



ECONOMY FEEDER A perfect working self-feeder for hogs. A 100-lb. pig pays for it. Saves on purchase price, time, floor space, repairs and feed. Will feed 40 hogs. Sold direct, $18.50. Money refunded if not satisfied. For further information address, THE ECONOMY FEEDER CO., Box 450 New Washington, O.

Clean Cut Business Farmers and Stockmen wanted as general and local agents, in counties and townships where we are not now represented. Write or call at once.
(The Tix Ton Line for Conserving Animal Life.)
PARSONS CHEMICAL WORKS, *Leona Park Experiment Station, Grand Ledge, Michigan.*

Swine

BERKSHIRES from the best blood strains for sale. 3 boars ready for service, 3 six months old boars, several open gilts ready to be bred, and some excellent 10 weeks old pigs, farrowed by 4 sows that averaged nearly 11 per sow. OLD FORGE FARM. C. R. FREED, Mgr., SPRING GROVE, PA.

Chester Whites Pigs for sale. Special price on boar pigs. All stock registered. ALLAN R. MORTON, ASHVILLE, N. Y.

DUROCS and P. C. PIGS $30 Pair Pedigree. Not akin. S. O. WEEKS, DeGraff, Ohio.

Big Type Polands, ALL AGES. Write your wants. W. C. KEYSOR, GREENWICH, O., R. D. 2

DUROC JERSEY MARCH SERVICE BOARS. July pigs. Colonial and Orion Cherry King breeding. Prices right. GEO. W. CRIM, Chrichsville, Ohio.

Large Berkshire Swine Registered High Grade. Prices reasonable. Write HOME FARM. CENTER VALLEY, PA.

CHESHIRES.—The high-quality home-market and home-table breed. Our type pleases. Pigs and service boars. Morningside Farm, Sylvania, Pa.

REGISTERED O. I. C. Herd Boar for sale, sure breeder. Also booking orders for Aug. and Sept. Pigs. BENJ. H. RUTLEDGE, Honesdale, Pa. R. 3.

Durocs, all im. Yearling and Fall yearling boar and Fall boars. Fall gilts, bred for Aug., Sept. and Oct. Spring pigs, e. sex. I. D. Jackson, R. 16, V. Wert, O.

Big Type O. I. C.'s Serviceable boars. Gilts of all ages. Fall pigs. G. P. ANDREWS. DANSVILLE, MICH.

REGISTERED BERKSHIRE PIGS. Five litters to choose from. Six weeks old pigs $13 each. I. C. TOMKINS, Ellenton, Lyc. Co., Pa.

O. I. C. Breeding Stock, Pigs and mature stock. Bred from registered boar, Juanita Winner. Prices reasonable. Satisfaction guaranteed. Quality Farms, Dryden, N. Y.

BERKSHIRES AND CHESTER WHITES All ages for sale: write your wants; we can please you. TWIN BROOK FARM, NEWVILLE, PA.

BUCKS COUNTY'S FINE PIG CLUB ROUND-UP

The best pig from each of the eighteen clubs in Bucks County was entitled to contest for the $100 in prizes at the final round-up held on the farm of H. A. Todd near Doylestown Saturday, October 4th. The prizes and winners are as follows:

1. John Bryan, Bedminster No. 1 Club, $50.
2. Leonard Cooper, Pineville No. 3 Club, $25.
3. Harvey Fretz, Fountainville Club, $15.
4. Russel Smith, Pineville No. 2 Club, $10.

P. E. Dougherty, swine expert; and C. G. McBride, State Club Leader, judged the pigs. The basis of award was as follows: Individual merit, 50 percent; gain per day, 40 percent, and report, 10 percent.

1st Prize O. I. C. Hog in Bucks County Pig Club

One hundred and fifty boys and girls and the leaders of the clubs were present at the final round-up. The pigs were all put in the barn yard after being weighed and then judged. After the judging was completed every member was called upon to give a record of his pig concerning the weight and gains of his pig as well as the number of pounds of feed fed during the 140-day period. The three boys who were sent to Springfield, Massachusetts, to represent Pennsylvania in pig judging work gave a description of this trip.

The prizes awarded on this day were donated by the Granges, Farmers' Clubs, individuals, banks, and various store and mill companies. Four hundred dollars was in this manner collected for the boys and girls of the county. Five dollars was given to each club for local prizes. Three dollars was paid to each club member who brought his or her pig to the final round-up. The other money will be used in printing and publishing a small pig club booklet which will be distributed to the boys and girls of the county. The following is a record of the highest prize winners.

Name	Days	Weight Start	Weight Finish	Lbs. Gain	Rank	Sale Value
John Bryan	155	53	332	279	1	$59.76
Leonard Cooper	153	46	337	291	2	$60.66
Harvey Fretz	146	49	322	273	3	Not sold
Russel Smith	153	49	341	292	4	Not sold
Claude Bryan	155	49	317	268	5	$57.06
Arthur Hixon	149	29	303	274	6	Not sold
Earl Daniels	154	47	312	265	7	$56.16
Milton Satterthwaite ...	147	42	289	247	8	Not sold
Catharine Cadwallader .	153	48	283	235	9	$50.94
Chester Sames	149	27	277	250	10	$49.86
Thomas Frederick	153	48	309	261	11	$55.62
Warren Weiss	144	42	293	251	12	Not sold
Eleanor Wilkinson	153	45	307	262	13	Not sold
William Swan	155	57	305	243	14	$54.20
Charles Sickel	153	43	289	246	15	$52.02
Elmer Hockman	159	60	288	228	16	$51.84
Lafayette Long	146	32	241	209	17	$43.38
William Hecker	147	41	247	206	18	Not sold
Charles Lownes	147	32	244	212	19	$43.92

WINTER CARE OF BREEDING EWES

Few farmers give their ewes proper attention between breeding and lambing times. To have success the farmer who keeps a few sheep must study the work carefully. Unless the ewes are well cared for, they can not properly nourish their unborn lambs and transmit vigor.

Sheep will thrive better when their quarters are well-ventilated, dry and free from drafts. Coarse wool breeds thrive better in a shed that is quite airy, even up to lambing time. Fine wool breeds will stand much warmer quarters. The breeding ewe must have plenty of exercise if she is to transmit strength and vigor to her offspring. She should run out in the open except on damp days.

The water problem should never be neglected. Farmers who pretended to know considerable about sheep argue that they do not need much water. Sheep can live for a considerable time without water but seldom thrive unless the supply is adequate. They should be given a moderate amount of pure water each day, unless quarters are so arranged that they can gain access to it at will. Avoid ice water. They will drink enough to supply their needs. Salt should be given frequently. Large quantities of salt at a time may cause them to drink too much water.

Corn fodder, silage and clover or soybean hay are all good for the ewe's ration. Sheep tire of a ration that is too monotonous. Where various feeds are available it is best to alternate. Good corn fodder is relished as a change from legume or timothy hay or silage. Especially before a change, and better at all times should stems and coarse uneaten parts of the ration be removed from the racks before another is given. It is dangerous to feed smutty straw to breeding ewes as it is apt to produce abortion. Breeding ewes need some grain before lambing time; a light feed of grain at first, and the amount increased gradually.—W. E. F.

GUERNSEYS

BUTTER FAT AT LOWER COST PER LB.

No other breed can produce rich golden butter fat as cheaply as the Guernsey. Official yearly records show —one cow has given 24,008 lbs. milk and 1,098 lbs. butter fat. Write for our free booklets.
The American Guernsey Cattle Club
Box M 40 Peterboro. N. H.

QUALITY ECONOMY QUANTITY

MAPLE LAWN HOLSTEINS

BEST in High grades and Registered Holsteins. Elegant high grade calves $25 each. With ten calves will give choice registered bull free. Will accept Liberty Bonds and W. S. S. at par. Guarantee safe arrival and gladly ship C. O. D. Write your wants. C. W. ELLIS, JR., Cortland, N. Y.

REGISTERED HOLSTEINS 40 heifer calves, 2 to 10 mos. old, $90 to $125 each or the lot for $100 each. 28 granddaughters of King of Pontiacs. 2 to 3 yrs. old bred. 15 other reg. heifers. 20 reg. bulls, 2 to 18 mos. old. Reg. cows, high-grade cows and 100 high-grade 2-yr.-old heifers due to freshen this winter. ⅞ Holstein heifer calves. Also 21 lb. son of King of Pontiacs.
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Special Sale of Ayrshires

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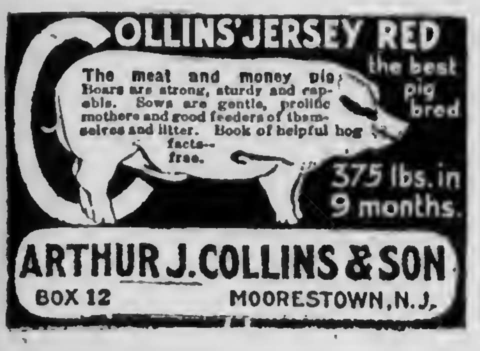

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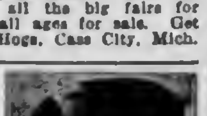

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Veterinary

Conducted by W. C. Fair, V. S.

Advice thru this department is free to our subscribers. Each communication should state history and symptoms of the case in full; also the name and address of writer. Initials only will be published. We cannot make reply by mail. This is one of the most valuable columns of the paper and we invite readers to make use of it. Clippings from this column, when properly preserved and classified, make one of the most valuable medical symposiums a farmer-stockman can obtain.

Heaves, Roarer.—I have a 16-year-old horse that will weigh 1250 lbs. which has always been well until 6 weeks ago. While hauling a heavy load up hill he suddenly began to blow, more so than usual. He is much worse some days than on others, running does not seem to affect him as much as heavy pulling. So far as I can tell he is healthy. He is valuable to me on account of my having recently commenced to farm for myself. G. L. L., Mt. Airy, Md. The writer is inclined to believe your horse suffers from incipient heaves, or may perhaps suffer from throat trouble. Heavy pulling when the stomach and bowels are very full of bulky food is sometimes followed by symptoms such as your horse shows. You need not feel alarmed about him, but remember it will be a mistake to feed him clover or musty, dusty, badly-cured fodder of any kind. His food supply should consist of grain, timothy hay and roots. Give him ½ dram fluid extract of lobelia and ½ oz. Fowler's Solution at a dose, 3 times a day. This medicine can be given in feed or in drinking water. He should have daily exercise and his stable must be well supplied with fresh air.

Chronic Grease Heel.—I have a horse 10 years old, with grease heel which is of 12 months standing. I keep hair cut short, have applied wool-fat, iodine, dilute carbolic acid, sulphate of zinc and water; also poultices, but this treatment fails to cure him. Have given him condition powder, also iron, gentian and sulphur. N. B., Narion, Pa. Chronic grease heel is considered an incurable ailment, but of course the ailment can in all cases be palliated if properly treated. The heels should be thoroly washed with soap and water before treatment is commenced. Mix equal parts tincture of iodin and tincture of benzoin (compound) and paint sore parts twice a day, use a small brush. After the sores are healed, dissolve one ounce tannic acid, 2 ounces glycerine in ½ pint water then brush some on heels once daily. Give him one-dram doses of potassium iodide in feed or in drinking water 2 or 3 times a day. The heels should be kept dry and stable kept very clean.

Indigestion.—I have a cow that lost her cud, or that is what I am told ails her. She took sick few days ago. L. L. P., Waymart, Pa. When a cow ceases to eat course fodder or roughage in quantity there is always less necessity for her to remasticate her food, consequently she ceases to chew her cud, until digestion of food goes on in a somewhat normal manner. Give her a full dose of cathartic medicine. One pound of epsom salts, ½ ounce ginger in 3 pints of warm water as a drench. Mix equal parts cooking soda, salt, ginger, cinchona, gentian and powd-give her two tablespoonfuls at dose 2 or 3 times a day. Change her feed.

Worms.—I have a six-year-old horse troubled with large and small worms. Have given him commercial remedies, but fail to find fewer worms pass him. J. E. S., Ridgeby, Md. Mix one part dried powdered sulphate iron, 1 part salt, 1 part red cinchona and 3 parts powdered gentian and give him a tablespoonful at dose, in soft feed twice daily.

Cough, Weak Knee.—Have 8 pigs that are 8 weeks old, one week ago most of them commenced to cough and have kept it up ever since. I also have a horse with tender shoulder and weak knee. What can be done for this ailment? J. W. I., Elmer, N. Y. Mix equal parts ginger and powdered licorice in their feed, a teaspoonful is about right for 4 or 5 pigs each dose, and it should be given 3 times a day. Apply equal parts turpentine, aqua ammonia and raw linseed oil to shoulder and knee every day or two. If the horse is lame, rest him until he travels sound.

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Economy in the Selection of Feeds

A Discussion of What to Combine for Best Results

Prof. CHAS. M. CUMMINGS
STATE COLLEGE, PA.

In these days of high feed prices it is especially important that the dairyman adopt some standard by which he can acurately estimate the relative economy in the purchase of various concentrates to be used in making up a balanced ration for the dairy herd.

Dairymen often believe the cost price per ton is the most important consideration. It is important, but more important is the comparative cost of net energy and digestible true protein in feeds. The farmer should ascertain the cost per pound of digestible true protein and the cost per therm of net energy (the digestible true protein and net energy contained in common concentrates may be found in Penna Bulletin No. 143, which can be had on request) in all the feeds available, and make the cheapest mixture that satisfies all requirements. The cheapest mixture is the one that not only supplies digestible true protein and net energy at relatively small cost, but also fulfills all demands with regard to certain other essential factors:

Palatability

Every practical stockman knows that to get the best results he must at all times provide feed for his animals which is palatable and altogether acceptable. Unpalatable feeds may be fed, but they should be mixed with palatable feeds. This does not mean that a mixture which is not relished at first will be continually refused, because with cows palatability is greatly influenced by familiarity and habit. A grain ration that is let alone at first may be readily eaten later.

Special attention must be given to palatability of the grain ration in feeding cows for maximum production. Oats, corn, horning feed, barley, wheat, wheat bran, wheat middlings, molasses, sugar beet pulp and linseed meal are common palatable concentrates, while buckwheat hulls, brewers' grains, by-products of oil extraction generally, cottonseed meal, distillers' grains and gluten feed are unpalatable.

Spring Farm King Pontiac

Bulk

The bulk of the grain ration, or the relative volume per unit weight, should receive some attention, unless the grain is fed on the silage. It is believed that bulky feeds are readily penetrated by the digestive juices and that they thus facilitate digestion. If the grain ration is not fed along with corn silage, it is best that at least one-fourth of the concentrate mixture be composed of bulky feeds. Brewers' grain, corn and cob meal, distillers' grains, gluten feed (slightly), malt sprouts, oats, rye bran, sugar beet pulp and wheat bran are all bulky feeds.

Variety

A higher milk yield may be expected from feeding a grain ration composed of a variety of feeds than when a smaller number are fed. By variety is not meant a mixture of several feeds all coming from the same plant; for example, a mixture of corn, corn gluten feed and dried distillers' grains from corn would not be one having variety. The grain ration should be made up of at least three concentrates from different plants. The reason for this is to insure an adequate supply of needed mineral matter or ash, and a balance of protein. With the exception of calcium and phosphorus, the dairy ration will ordinarily contain enough mineral matter. These two ash ingredients, however, are required in such large quantities for skeletel growth and maintenance that they should be considered in formulating a suitable grain ration for the dairy herd. The cereals and their by-products, such as bran and middlings, are low in calcium. This deficiency is overcome to large extent by feeding legumes or meadow grasses which contain calcium in abundance. Phosphorus is carried in large quantity by the cereals and brans, malt sprouts, oil cakes and brewers' grains.

Some concentrates are known to have a beneficial laxative effect on the digestive system, while others are constipating in nature. Linseed meal and wheat bran, for example, are well known for their tonic properties, while cottonseed meal is decidely constipating. Where no silage or leguminous hay are available some laxative concentrate should be included in the grain ration. Other things being equal, the highest yield of milk will be obtained when the digestive system is maintained in a mildly laxative condition.

Cost

Inasmuch as practical dairying is a business proposition, the dairyman wil be governed in large degree in his choice of concentrates by the item of the cost. As already suggested, the most suitable measure of comparative economy is the cost per pound of digestible true protein and the cost per therm of net energy. In the table at the end of this article these costs have been computed for the more common straight feeds.

To illustrate the use of such a table in formulating an economical grain mixture, let us assume that we are to balance a ration for a herd of any number of cows and that the average cow weighs 1,000 pounds and gives 20 pounds of 4.5% milk daily. The roughages available are red clover hay and corn silage. Hay and silage are fed at the rate of .8 of a pound and 3 pounds respectively, for each 100 pounds live weight. From Penna. Bulletin No. 143 we find the requirements for a 1,000 pound cow giving 20 pounds of 4.5% milk as below:

Let us assume further that all feeds must be purchased and the concentrates available are barley and corn meal at $70.00, linseed meal (old process)and choice cottonseed meal at $85.00, wheat bran at $45.00, gluten feed at $60.00 and oats at $50.00 per ton.

	Digestible True Protein Lbs.	Net Energy Therms
Maintenance	0.5	6.0
20 lbs. of 4.5% milk	1.04	5.8
Total requirements	1.54	11.8
8 lbs. of red clover hay contains	.392	3.094
30 lbs. of corn silage contains	.180	4.770
38 lbs. roughage contains	.572	7.864
Balance to be supplied in grain mixture	.968	3.936

Ratio required in grain mixture equals 3.936 divided by .968 equals 1 to 4.1.

Referring to the above table it may be seen that the cost per pound of digestible true protein in barley at $70.00 per ton is 43.8 cents as compared with 53.8 cents the cost per pound of digestible true protein in corn meal at the same price per ton. Similarly a comparison of the relative cost per therm of net energy shows barley to be slightly the cheaper. Obviously, then, barley will be our choice between the carbonaceous feeds, barley and corn meal, because barley at $70.00 per ton furnishes both digestible true protein and net energy at smaller cost than does corn meal. To balance the grain ration we must have some high-protein feed. Choice cottonseed meal at $85.00 per ton is a cheaper source of digestible true protein than is linseed meal at the same price; therefore, the former is preferred. Some linseed meal, however, will need to be added to make the grain mixture palatable. Gluten feed, it is seen, is a relatively cheap source of both digestible true protein and net energy, and should, therefore, be included in the grain mixture. For the sake of variety, bulk and palatability it will be advisable to add one more of the available feeds. Wheat bran should be used in preference to oats, because, although oats are a cheaper source of net energy, wheat bran furnishes a much more economical source of digestible true protein, also because digestible true protein is relatively more expensive than is net energy.

The problem now resolves itself into formulating a grain ration having a ratio of digestible true protein to therms net energy of 1 to 4.1, using the feeds ground barley, choice cottonseed meal, linseed meal, gluten feed and wheat bran:

	Digestible True Protein Lbs.	Net Energy Therms
100 lbs. ground barley contains	8.0	90.0
100 lbs. choice cottonseed meal contains	35.0	93.0
50 lbs. linseed meal (old process) contains	14.0	44.5
150 lbs. gluten feed contains	30.0	121.5
100 lbs. wheat bran contains	11.0	53.0
500 lbs. total contains	98.0	402.0

The ratio of digestible true protein to net energy equals 402.0 divided by 98.0 equals 1 to 4.1.

Does this grain mixture satisfy all five requirements? By studying the formula carefully it will be seen that this question can be answered in the affirmative: It has been made reasonably palatable by substituting linseed meal for a part of the cottonseed meal; one-half by weight is composed of bulky feeds. It has plenty of variety, since it is made up of concentrates coming from five different plants. Laxative feeds constitute nearly one-third by weight; and lastly, it is an economical grain mixture because the digestible true protein and net energy are from the cheapest sources when proper allowance has been made for other factors considered.

Manurial Value

In the purchase of feeding stuffs a consideration of their worth as fertilizers should always be given some weight. The cow in milk voids about 75% of the nitrogen and ash contained in her food. It is apparent, therefore, that the fertility value recovered in the manure, when certain concentrates are fed, may be quite high. An authority gives the fertilizing constituents in some common feeds as follows:

	Fertilizing Constituents in 1000 lbs.		
Concentrates	Nitrogen lbs.	Phosphorus acid lbs.	Potash lbs.
Dent corn	16.2	6.9	4.0
Oats	19.8	8.1	5.6
Wheat	19.8	8.6	5.3
Wheat bran	25.6	29.5	16.2
Linseed meal (old process)	54.2	17.0	12.7
Choice cottonseed meal	70.6	26.7	18.1

The nitrogen, phosphoric acid and potash recovered in feeding 1 ton of linseed meal (old

(Continued on page 6.)

Some Present Dairy Problems

A Review of Present Conditions and Prospects for the Future---By H. H. Lyon, New York

There seems to be a little unrest in the Dairymen's League. It was evident in September When the October price was announced and again when the November price came out there was a good bit said. There will be some words spoken in some of the meetings before all the local delegates are selected and all the county or district caucuses are held. The relatively lower prices were inevitable, however, even without any dealers' and consumers' and polititians' propaganda.

When we come to add all that it is almost a wonder that there is any market for milk at all, even as I write the boycott is on to refuse milk in New York until the price comes down. We agree that strike methods are bad and we want no more milk strikes, but the boycott method is even worse. The governor is to say something at a meeting to-night and we hope he will be wise.

To come down to facts, we have seen the last of really high prices for milk, at least that is true if there have been any such prices for dairymen. It is absurd for dairymen to say, as some are reported to be saying, that they could sell to better advantage if not connected with the organization. Of course there may be some such case somewhere, but it would not be true if there were no organization. It is our duty to stay right by each other now, for our darkest days may be near at hand. It is strongly contended that the present boycott, in New York is certain to cause higher prices for milk later on and will advance the price of many other foods almost at once. I am not so clear on this point, but it is true cows are for sale and auction sales are frequent. Almost all farmers are doubtful as to profits at present prices for milk and for feeds.

The League annual meeting comes early next month. I do not look for any material changes in the direction, yet some changes are possible. There will be no material change in the policy of administration so far as I can see, and I believe that it is a poor time to try any extension readjustments. There is complaining but no new plan proposal as a substitute for the present. We have got to get accustomed to working together.

The serious problem for the dairy farmer is that of feeding his cattle. Not but what there is a good supply of roughage in the barns and a reasonable supply of grain feeds. It is for next season that we will be thinking and already have commenced it. There is more plowing being done in every locality this fall than last. Some younger men are taking hold of some of the farms which means that more work will be done on some of them and more crops raised. This is by no means universal and the change is not so very marked yet it is something. The result is going to be a slight diminution in the purchase of grain feeds another year with more home grown feeds used. No startling change only a little.

What are the increased crops likely to be? I will make no hold fast prediction. Silage is to be rather more, cabbages for feeding will be no less, but may be in a little larger supply. These are in the class of roughages, of course, but there will be also more clover grown. I do not think that we will see any marked increase in the production of alfalfa in our truly dairy regions, for alfalfa is not particularly adapted to these regions and clover is about as good. In the line of grains, oats are the standby, but some corn will be grown for milling or feeding as grain. We may see a little more rye and quite a little more barley. A mixture of peas, oats and barley is being recommended. We are gently moving towards the growing of a little larger supply of these feeds. We will still remain large purchasers of feed, but I hope we will select and buy rather more intelligently than we have sometimes done.

The farm labor situation is still so serious that we cannot expect very material changes in our methods at present. If good farm help were available at fairly good prices much of the feeding stuffs would be home grown unless feed prices decline very soon and very largely. As it is there will be many who will feed cabbages in the fall in place of silage and will follow with beet pulp regardless of its present cost of three cents a pound. Not a few will refrain from the growing of any grain until they can get help to do the work. It is only the more fortunately situated who can grow considerable silage and grain for feeding.

We may consider the cry that dairymen are going out of business by reason of cut prices on milk and because of the unreasonable acts of city people to be bluff. Some of it is. Yet I personally know of such cases. I would hesitate to estimate the decrease in the number of dairy cows in every township but I feel sure that it is something. Moreover, the price of dairy cows has declined quite a bit. It is not very likely that we will see the former price fully restored. We are not settled quite enough yet to enable one to say just how much has been the decline. It must be ten per cent. and may be more.

I do not want anyone to get the idea that the dairy business has gone to pieces up here in our dairy country. It hasn't. I do think that we are on a little lower scale of profits with a little closer margin to our credit. We shall continue to produce milk and we shall sell it to a fair advantage, but it is going to take good management to give us good salaries for our work, or it will require rather superior advantages to bring about that result. Our farm people have not fallen into the extremely wasteful habits of our village and city folks, but some even on the farms will need to get back closer to the old economies of pre-war days.

Feeds must come down, but they are not likely to this winter. The situation has now become fixed for the next few months. There will be changes of course, but no general breakdown during this feed-consuming period. At least that is the way it all looks now. Seventy dollar feeds are to be figured when estimating the profit in selling milk.

Farmers have not yet devised a scheme that will enable them to get along without the feed dealer so that all may have feed available when it is needed.

Co-operation associations have undertaken to do some business and have sometimes had a little success. Their continued success is uncertain. We must approach this matter with some degree of caution. The state grange is working on the scheme and seems to be on the right track. If they can get in position to quote to any farmer or groups of farmers proper wholesale prices on cars of feeds it seems to me that they will have rendered a service. They can already do something in this line and they have adopted the plan which I regard as correct of quoting the same prices to all whether it is a grange, a granger or any other farmer. The only difference is that only grangers get the benefits of profits when these come.

It is now only the twenty-first and the December prices for milk are announced to us thro the dairy press. Presumably these are correct. This is as it should be. Some months there has been a ten-day delay. This may have been the fault of the news gatherers but many feel that our own people may have sometimes been a little careless. Circular letters are now due all the local Leagues and very likely we will get them. There is no greater decline for December than we expected. It is I believe 38 cents under last December, which was $4.06 for three per cent milk. This price of $3.68 at two hundred miles out means that the average farmer who is said to produce 3.6 per cent. milk and who lives out 250 miles will get not far from $3.80 a hundred pounds after delivering it at the station. As feeds can be had at about $3.50 or $3.60 the prices ought not to be considered so bad. I look for no very pronounced criticism on the part of the milk producer so far as the League is concerned.

The blindness of the city consumer and the unreasoning warfare on the part of the city politician is ripe for the severest discussion. Our government officials are also the cause of much anxiety on the part of farmers, but it is to be feared that many of them come under the head of the classes first mentioned.—H. H. Lyon, New York.

During the world war, American exports of milk products increased considerably more than threefold. In 1914, 70,000,000 pounds of milk left the United States. In 1919, the total was 2,550,000,000. It was not the raw milk, of course, but for the sake of comparison the United States Department of Agriculture has reduced the figures to pounds of milk. Butter and cheese constituted the two items making up the total in 1914. In 1919, there was a big added item of condensed milk—something more than half the total.

There is little excuse for any one using a grade or scrub bull when it is so easy to secure a purebred bull. Men who persist in using scrub bulls to head their herds are very indifferent to their own business enterprise and can not be considered first class dairy farmers.

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Our job is to serve our readers. Whenever and wherever we can help you, write us.—The Editors.

The Public's Rights

TECHNICALLY and legally the coal strike is over, but the miners are not digging coal. The public is not warmed by the drawing of fine distinctions about names or legal phraseology; it is not concerned whether the cessation of production is called a strike, a walk-out, a lock-out, a disagreement, or a series of holidays. What the public wants is coal, and it is willing to pay a fair price for it; but it is not willing to pay a price that contributes to profiteering, or to the setting of hours and wages out of proportion to what other lines of industry will warrant. The present situation is a travesty upon our social order. The public is facing winter weather with a 12-day's supply of soft coal and production stopped with no prospect at this writing of speedy resumption. There is an unlimited supply in the earth and plenty of available labor to produce it, but because the operators and the miners are deadlocked in disagreement the industries must close and the hearth fires go cold. Officials say there is no authority outside of military necessity to operate the mines, and no machinery for the enforcement of arbitration. Is our civilization to continue to be dependent upon the whims or greed of individuals? Or shall we adopt such principles as will put the rights of society first, and the rights of the individual second?

A Worthy Cause

ONE of the most worthy causes which may engage the attention of those actuated by the Christmas spirit is the Society for the Prevention of Tuberculosis. A large part of the support of this society is derived from the sale of the Red Cross Christmas Seals. Almost every one has seen or received letters with these little seals pasted on the back of the envelope, but perhaps some have not known what they signify. It means that the sender has contributed to the support of this worthy society and mildly suggests that you do the same. Governor Sproul has named December 5, 6 and 7 as days on which schools and churches should make especial effort to contribute in support of this work.

Progress is being made in the control of this plague but it is by no means under control. More prevention is needed; tho the ever on-coming crop of new cases is being well handled, there is need for the spread of information as to how infection may be prevented. Children must be taught how to live so as to avoid it and those who have it must learn how to avoid communicating it to others. This is a work of education which this society is carrying on, and it is deserving of your support.

Buy Red Cross Christmas Seals. They may be obtained from your druggist, or from the Pennsylvania Society for Prevention of Tuberculosis, 905 Pennsylvania Building, Philadelphia.

Farmers' Institutes

THE farmers' institutes in Pennsylvania begin this week under the new plan. Instead of having two or three state speakers tour a section of the state attending all the meetings in that section, each locality has been asked to name the subjects in which it is interested and in need of information and speakers especially fitted to discuss those subjects are sent to the place. Other institutes in the same county may thus have entirely different subjects discussed by different speakers. In this way the needs of the community are made of first importance and instructors are chosen to fit the needs, rather than requiring the community to choose from what is available as heretofore. Another change is the required cooperation of the local organizations in the county, including the farm bureau. In this way all the agricultural activities of a county are brought together for the common discussion of local problems. The idea, as we understand it, is to conduct the institutes more in the nature of roundtables instead of meetings where a few deliver set speeches. We shall be glad to hear how the new plan works in your community.

What Do Farmers Think?

WE have been wondering what our eastern farmers think of the Farm Bureau Federation movement. Here is what a trade paper, published in the interest of middlemen trading in farm products, thinks about this new organization of farmers. The comment is based upon some remarks made by Mr. Eckhardt of Illinois upon cost and selling price at the late Farm Bureau Federation meeting. The trade paper mentioned speaks as follows:

> "* * * Mr. Eckhardt may safely be dismissed as a worthless guide to the business end of farming. In the first place, it is apparent he had given no real study to the causes of the fluctuations complained of. He assumed them to be purely arbitrary. Without, however, going into these, Mr. E. and his disciples should be reminded that cost of production has no more relation to the prices of farm products than the ebb and flow of the tides. The price of a diamond may be affected by the cost of cutting the stone, and the cost of production no doubt affects the price of articles of personal jewelry or decoration, but the cost of producing a hog or a bushel of wheat has absolutely no relation whatever to or effect on the price in the markets, which is made by demand alone. If the farmer does not fully understand this he is living in a fool's paradise; and he has no guide to his planting or feeding operations as long as he imagines with Mr. E. that his cost of production can at any time or place be directly reflected in the price paid to him. Price may and does affect the volume of production, and the volume of production in turn is undoubtedly reflected in the price, but neither are in any way affected by the cost of production. And this is true of almost all commodities, barring some few articles of virtu, in common use. * * *"

Farmers, if what the writer of the quotation says is true is it not time we had organization strong enough to exercise a little control in the matter? Is it just that the cost of production should have no influence whatever upon the selling price? The logic of the writer quoted is hopelessly twisted, but we will not dispute but what it is a true statement of the facts as they have existed. The question is: Will farmers continue to let the old conditions continue? This is the fundamental weakness in agriculture at present and the future success of the business depends upon finding a remedy for it.

Mineral Matter in Feeding Materials

SUITABLE roughage rations, rich in protein to make muscle and mineral matter to build bone, are needed to make animals possessing that superb vigor and finish necessary to win blue ribbons at leading fairs and live stock exhibitions. Mineral matter in feeds means more than most of us think. Ever since Henry, at the Wisconsin Experiment Station, demonstrated years ago that the bones of pigs could be inccreased in strength by adding mineral matter to the feeds, experienced feeders have proved that the same thing holds good with cattle and horses. Some breeders have tried it by feeding ground bone, wood ashes, phosphates, lime and such feeds as oats, oilmeal, clover and alfalfa hay, all rich in a variety of minerals. Results have proved that animal form, fiber and function are influenced by these feeds. Muscles are more supple, joints are stronger and the animals have a more sprightly step. The bones may not be any larger, but they are harder and stronger. What is called quality and stamina is positively improved and that is of greater importance than size of bone. Strength and vigor depend upon supple muscles, strong bone and elastic tendons.

There is abundant evidence that normal function of the digestive system and the reproductive organs depends upon an adequate supply of mineral elements as well as protein in the feed. In feeding hogs repeated experiments indicate that they keep healthy if constantly supplied with plently of mineral matter, but if this is neglected they become lame and unthrifty. An even more valuable discovery is that the liberal feeding of feeds rich in mineral elements decreases the percentage of non-breeders and prevents abortion both in brood sows and dairy cows.

Milk contains a high percentage of mineral elements from which the bones and teeth are formed. This means the cow's or sow's ration should contain these materials in abundance. Since the development of the dairy cow to her present high production there has been some question as to whether the common feeds supply her with sufficient mineral elements. The Ohio Experiment Station has made a number of investigations to determine whether any mixture of feeds will supply a heavy producing cow with sufficient mineral matter for manufacturing milk, growing her unborn calf, and at the same time keep hereself in a vigorous condition. The general conclusion by the Ohio authorities is that even with clover and alfalfa hay, some calcium may be fed to the advantage of the cow. Alfalfa and clover hay are rich in mineral elements and many authorities doubt the wisdom of these conclusions.

Experienced feeders have long realized the importance of mineral matter in the heavy producing dairy cow's ration, and urged the feeding of roughages containing more mineral elements. They know that weak calves are frequently the result of feeding rations deficient in mineral elements, and that cows fed plenty of clover and alfalfa hay are less likely to abort; this is especially true when they are producing heavy yields of milk on rations containing a large amount of protein derived from certain grain feeds which have been thru various processes of manufacture.

Roughage is the best and cheapest source of these mineral elements, and clover and alfalfa are richer in this respect than other forage crops. This suggests feeding more good roughage and only enough grain to maintain profitable milk yields or normal growth of young animals. It has also been demonstrated with young animals that a pound of protein in roughage produces more increase in growth than a pound of protein in grain. The minerals in the roughage may explain the fact. Horsemen claim that colts make the best gains and exhibit most action when oats make up the bulk of the grain ration. Oats are rich in mineral matter, so perhaps that is the reason. There is evidently no specific tonic in oats as old-time feeders supposed. The beneficial results seem to be due to protein and minerals more than anything else. In fact rations in which equal amounts of protein and mineral matter are fed seem to give equal health, vigor and exuberance of spirit.

American feeders must devote more attention to feeding an abundance of good roughage to furnish adequate mineral matter to their breeding stock and young animals. Regular breeding and steady growth depend upon an adequate supply of mineral matter. Breeding animals must have unusaul quantities of mineral matter to maintain normal body vigor and support the unborn young. The growing, multiplying cells of the young animal's muscles, bones and vital organs must be constantly supplied with mineral matter so that growth and vigor may not cease for a day. Prize-winning animals do not sell by the pound; they must develop quality and finish, and prove regular breeders as well. The trick can be turned only by feeding an abundance of protein and mineral matter in the form of clover hay, alfalfa hay, oilmeal and oats along with the other home-grown and by-product feeds.

HARRISBURG LETTER

Fair Price Plans.—Formulation of a State policy in regard to appointment of "Fair Price" commissioners or committees thruout Pennsylvania awaits the return of the Governor from a late autumn vacation during which he is assembling data as to the manner in which the system has worked in other States, and the opinions of people in Pennsylvania in regard to it. There are some at the Capitol inclined to believe that this should be a matter for local regulation and that if any official price fixing or other action is taken it should come from the federal and not the State governments, while there are others who contend that a well balanced local committee cooperating with the newspapers could speedily adjust local conditions, it being taken for granted that such a committee would recognize the situation on farms and arising from transportation. The governor has declined to express himself in regard to the state entering upon the price-fixing proposition, but men about him think county, city, or borough committees can do the best work.

To Boost Markets.—The replies to the inquiries of Guy C. Smith, state chief of markets, as to the markets in various communities in Pennsylvania have developed the fact that there are now 131 markets and that the number has declined in the last few years. Most of these markets are in small cities and the agricultural section of eastern Pennsylvania especially in the southern part. Something less than half were curb markets and in the other markets it was found that the city or town merchants had stalls and were selling in opposition to farmers. Mr. Smith received a number of appeals from officials of boroughs asking if the state would not assist in organization of markets. Further inquiries have turned up the fact that farmers have failed to get regular patronage in industrial towns and have had to haul their produce home, the houskeepers patronizing their corner grocers. Mr. Smith is inclined to believe that there is a field for curb and even enclosed markets if people will buy regularly from the farmers and that the active men in each community could do something toward working up enough business to assure the farmers of business that would not force them to take produce home again. It is probable that some tests will be made in various parts of the State in a short time to see how the plan will work.

Institute Week—The start of farmers' institutesthis week in four counties will furnish some opportunity for interesting study. The general scheme for institutes is to make them an exchange for information, and this year men will be invited to ask what is on their minds while the speakers, as has been stated, will talk on the specialities of the community. The January list will soon be announced and the plans for it will depend in a way on what transpires in December.

Health Councils.—Every county is now forming under State suggestion a health council, composed of people active in civic and other work whose function will be to co-operate with the regularly constituted health authorities either in the matter of encouraging health education and proper sanitation or in backing up the officials when quarantine or other drastic steps are needed. These health councils have the sanction of the governor and it is believed that they will be able to fill a gap which has been noticeable when anything serious turned up affecting the health of a community.

Diphtheria Again.—There have been further spreads of diphtheria in the State. Several weeks ago this disease turned up in a number of mining and other industrial towns, stringent health measures checked it. Now it has been appearing in rural communities and the State authorities are calling upon the medical men to enforce isolation. This is the only serious health occurrence this year, the State having escaped influenza.

The Telephone Ruling.—The order of the Public Service Commission that the Bell Telephone Co., return to the rates which the State fixed in 1917 and that it operate under them until April, is nothing more than an assertion of State rights. When the federal authorities put the so called Burleson rates into effect they ignored the State Commission. The Bell naturally wanted to keep the rates in effect after today when the federal authority ceases on intra state matters, although there is reason to suspect that the telephone officials liked federal control no more than the State officers or the public. The interesting thing now will be to watch what happens to the rates advanced by other companies. The Bell is preparing to come in next spring with a request for an advance to even it up with the rates put up by the independents when the federal operation showed the way. Meanwhile the telephone patron will have a brief taste of what something was before the war.

Farming Up to Date.—The figure gatherers of the State Department of Agriculture have reported that there are about 4,000 farm tractors at work in Pennsylvania and that the number has more than doubled in a year and a half. Figures have also been issued showing 43,657 silos in use in the State, a gain of over 11,000 in a year, mainly in the northern tier. Another group of figures published shows that there were 362,249 dogs licensed in Pennsylvania last year and over 75,000 killed. Incidentally, a number of people got arrested for failing to obey the law and other people should have been.

Revenue Breaks Records.—Auditor General Charles A Snyder's promise to provide the revenue for the unprecedented appropriations voted has been made good. The State got in $52,000,000 in the fiscal year that closed yesterday, smashing every record by over $8,000,000. The prospects for the coming year are as good. With all this wealth and a constitutional revision coming along it should not be a difficult matter to arrive at some definite policy in regard to aid to hospitals and homes over which the State has no control as far as a dollar of its money goes. Pennsylvania will be asked to provide great road and institutional building programs and to establish branches of government distinctly devoted to welfare, but it is noticed that in every jump of the revenue the grants to institutions which the state does not run keeps pace.—Hamilton, Harrisburg, Pa., Dec. 1.

NEW YORK LETTER

Farm Publications Widely Sought. Over 3,000,000 periodicals have been distributed by the Cornell College of Agriculture during the past year. They covered 54 different subjects. The bulletins on farm topics and on the home are perhaps most popular. A new series of thrift bulletins are in great demand not only by the people but by the W. C. T. U. and the Y. W. C. A. Associations, also bankers' associations. In order to meet the new demands for this free service of the college a new appropriation must be made. Even the old lists will more than use all the available funds and an emergency appropriation by the Legislature is hoped for.

Storage Bill Protests Felt.—New York Senators and representatives in Congress report vigorous action on the part of farmers of this state regarding the passage of the proposed cold storage bill. They object to limiting the time of storage, to exemption of apple wastes, chops, skins and cores; they also protest against permission to seize food in transit on recommendation of employes, that it is likely tobecome unsound, to filing monthly statements, and to the stamping of all goods with "Cold Storage," if they have ever been in storage; and they protest the incension of fruits and vegetables in the list of commodities covered by the bill. All the leading fruit and vegetable associations of eastern and western parts of the state have sent letters to Washington, including the Canner's Association and the claim that the bill is pernicious by so many authorities is waking the Congressmen to the facts of the situation.

Bee Keepers Ask Protection.—The Onondago County Bee Keepers' Association will ask the new legislature for a law to prevent the spread of epidemics among bee colonies by requiring all owners to register the number and location of all swarms so that inspection may be made to determine accurately the conditions.

The spread of foul brood threatens the industry with extinction, and a state wide law of this sort is badly needed.

The Shooting of Song Birds.—A Westchester County hunter, a foreigner, has just settled for violating the law protecting song birds. He was found with 64 song birds of 19 varieties in his bay, and at the rate of $60 for breaking the law and $25 for each bird he was held for $1,660. After over a month, mostly in jail, he has settled for $300. This wholesale destruction of protected songsters is far too common and needs regulating.

Posting Farm Lands.—Farm owners over an area two miles wide and eight miles long, near Jamesville, have been driven to post their lands, waving off hunters and fishermen. Their losses of live stock, crops, and other damage to property by city residents have aroused the owners and trespassing will be severely dealt with hereafter.

Tractors for Lumbering.—Since last winter experiences with tractors in the lumber regions of the Adirondacks dealers are selling large numbers for use this winter. One machine will do the work of twelve horses, and no shovelling of snow is necessary. Former army truck and whippet tank operators are found to be the most successful drivers, as one of the drawbacks is the difficulty in operating the tractors.

Market and Crop Notes.—Due to considerable new truck lands New York will lead all the country excepting California in the production this year of lettuce, celery and cabbage and will make an excellent showing in onions, potatoes, and mixed vegetables. Tho the fruit crop was short, excellent methods produced fine quality and prices have made it a good season for grocers. Central packing houses have been organized in Wayne, Niagara and Ulster Counties and the time is not far distant when this state's fruit will be packed, graded and distributed on lines that have made the California fruit growers' exchanges so successful. Despite the great shrinkage in the general cabbage crop our state leads. In central counties the crop was normal, due largely to the use of an improved type of home grown seed, and methods that prevent disease and produce results. Again the Farm Bureaus have helped by showing best methods. The price of cabbage has just taken a spectacular rise, as most of it is out of the hands of the grower. One Cortland firm of dealers has made a fortune by fitting all available storages with cabbage at $30 a tion. They have now cleared out all holdings at $65 it is reported. Other dealers have been paying $50 the past few days. Potatoes are going out more rapidly than last year at $1.25 a bushel. Wayne county's heavy crop of celery will put the state's totals in this crop beyond last year's of 1336 cars. The price is now about $3 per crate. Severe weather has checked fall plowing and the season's crops are practically all in. There is an unusual number of farm auctions advertised and many farms are being sold. Fresh dairy cows bring $175 to $200 each if good.

NEW JERSEY NEWS

College.—Essex County stands first in the number of students taking agricultural courses at the State Agricultural College at New Brunswick. There are 22 students enrolled from this county in the short courses, and 14 in the four-year course. Both the long and short courses show a large post-war attendance, and a profitable season is anticipated. The short courses were opened on November 17 last and will be continued until February 20, 1910.

Turkey Scarce and High.—Turkeys for Thanksgiving were not so plentiful in the foods shops, and the poultry dealers found that they were compelled to fix a price as high as 65 cents per pound for this kind of holiday fowl, that is the highest grade, while for the second they made a price about 60 cents per pound. Owing to the fact that there had been but little demand for frozen or cold storage poultry in various parts of the state, very little of it was in stock in the markets and other places for the Thanksgiving table. Fresh fowl was in keen demand, and the prices were quite reasonable considering the extremely high cost of everything of a food character these days. The highest prices for roasting chickens was in the neighborhood of 50 cents; guineas, 50 cents, and ducks and geese, 45 cents.

Pig Clubs Raise Four Tons of Porkers.—A total of 8,729 pounds, or more than four and one-quarter tons of pork, were grown by pig club members in Mercer County this year. This record sets a new epoch in pig club work in New Jersey. Of the 52 boys and girls who started last Spring, records were kept by 41 and weight records have been obtained for 45. Last year, the heaviest pig in the contest was raised by Thomas Dolan, of Dutch Neck, and weighed about 260 pounds, while Wesley Konover, also of Dutch Neck, was a close second, his pig weighing 257 pounds. This year, there were 11 club members who not only equalled but far surpassed this record, one member raising a pig which passed the 350 mark. Three members of the club raised pigs, which weighed each over the 300 mark.

Bolshevism and Socialism.—"Bolshevism and Socialism never have been able to secure a strong hold in the country, especially on the farmer, because his work demands his entire time and attention," so declared Prof. Alexis L. Clark, chief of the Bureau of Markets, in an address at a meeting of the Morristown Farm Service Exchange. Mr. Clark also stated that "the success of the organization (Farm Service Exchange) depends upon the loyalty and energy of every man working, not only for the well-being of his own particular farm, but also for the success of those throughout the country." He added that "the success of the whole depends upon the success of the individual."

Young People's Night.—In order to instill enthusiasm into the young people in grange work and to give them a little recreation, the Allentown Grange held a "Young People's Night" that was largely attended by the boys and girls, who enjoyed every minute of the time spent at the affair. The grange also elected new officers.

SHORT COURSE IN FARMING AT PENN STATE COLLEGE

The annual winter short course in agriculture at the Pennsylvania State College will begin January 8, 1920, and end March 4. Because of the large enrollment at the College this year a canvass of the town was made to see if rooming and boarding places could care for the short course students. It was found that 100 can be accommodated. Seventy have already applied. For many years this course has given those who could not take one of the longer courses a chance to put in the winter months to the best advantage. A wide variety of subjects is offered, so the student can specialize in any branch of farming he desires.

COMING EVENTS

Penna. State Grange, Pittsburgh, Dec. 9—12.

Maryland State Grange, Chestertown, Dec. 8—11.

Montgomery Co., Pa., Corn and Fruit Show, Norristown, Jan. 6—10.

A. V. Poultry Association, New Kensington, Pa., Jan. 26—31.

Cornell Farmers' Week, Ithaca, N. Y., Feb. 9—13.

The farmer is between two millstones, agitation for lower prices on farm products, and continued high cost of everything else. Prices on no other class of products, no matter what the increase, have met with such protest as that which has come from the public where farm products are concerned. The farmer is expected to meet this demand for lower prices on farm products in the face of increased cost of labor, money, and practically everything else. The only way to do this is to keep down production costs.

Since John Barleycorn went out, failing to mind your own business has been the source of 99 per cent of all the misery in the world.

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THE variety of wholesome candies so easily made at home with Karo syrup gives a really intelligent solution of the Christmas candy problems.

Its lots of fun for the children themselves to make it and Karo always insures success.

Christmas candies cost more than ever this year. Karo candies are as good as can be bought and at a fraction of the cost of good store candy.

The Most Delicious Caramels You Ever Tasted

KARO CARAMELS

1 cup Granulated Sugar	¼ cup Vinegar
1 cup Karo	2 tablespoons Mazola
¼ cup Water	1 teaspoon Vanilla

Boil the sugar, Karo, water and vinegar six minutes, and add the Mazola. Cook till it forms a soft ball in cold water. Remove from fire, and stir in the vanilla. If preferred, one-half cup of candied cherries, cut in halves, may be added. After heating thoroughly, turn into tins well oiled with Mazola. Mark in squares when cool, and cut when cold. Wrap each cube in waxed paper.

FREE Beautifully illustrated Corn Products Cook Book of 64 pages containing more than a hundred valuable recipes for candies of all kinds, cakes and pastry of every variety, sauces, and salad dressings. All recipes originated by leading professional cooks and endorsed by Domestic Science Experts. Every housewife should possess a copy of this book—sent free. WRITE TODAY. Corn Products Refining Co., Dept. 31, P. O. Box 161, New York City.

ECONOMY IN THE SELECTION OF FEEDS

(Continued from page 2.)

process) is equal to the amount of these fertilizing constituents contained in 1 ton of 4-1.5-1 fertilizer. The nitrogen and ash voided when 1 ton of choice cottonseed meal is fed equals that contained in 1 ton of 5-2- 1.5 fertilizer. In view of these facts it is not strange that cottonseed meal has sometimes been applied directly to the soil as a fertilizer and, moreover, that the fertility value of a feed has a very important bearing on its economy as a part of the grain mixture.

Every dairyman is vitally interested in reducing the cost of milk production. This most worthy object can be attained by feeding the dairy herd a liberal allowance of a balanced concentrate mixture which is palatable, bulky, has variety, has a beneficial action on the digestive tract and is economical from the standpoint of cost per pound of digestible true protein, cost per therm of net energy and its value as a fertilizer.

Cost Per Ton	Cost Lb. Protein (Cents)	Cost Therm Energy (Cents)
	Barley	
$80.00	50.0	4.4
70.00	43.8	3.8
50.00	31.4	2.6
	Buckwheat Middlings	
70.00	16.6	4.7
50.00	11.8	3.1
	Cottonseed Meal—Choice	
90.00	13.0	4.8
80.00	11.4	4.3
70.00	10.0	3.8
	Cottonseed Meal—Prime	
80.00	12.6	4.3
70.00	11.1	3.6
60.00	9.7	2.8
	Corn Meal	
80.00	61.5	4.5
70.00	53.8	3.9
60.00	46.0	3.3
50.00	38.2	2.7
	Corn and Cob Meal	
60.00	50.0	4.1
50.00	41.5	3.5
40.00	33.0	2.9
	Gluten-feed	
70.00	17.5	4.3
60.00	15.0	3.7
50.00	12.5	3.1
	Gluten-meal	
80.00	14.3	4.8
70.00	12.5	4.2
60.00	10.7	3.6
50.00	8.9	3.0
	Hominy-feed	
80.00	57.1	4.9
70.00	50.0	4.3
60.00	42.9	3.7
50.00	35.7	3.1
	Linseed Meal—Old Process	
90.00	15.5	5.1
80.00	13.8	4.5
70.00	12.1	3.9
60.00	10.4	3.3
	Linseed Meal—New Process	
90.00	14.5	5.3
80.00	12.9	4.7
70.00	11.3	4.1
60.00	9.7	3.5
	Molasses—Corn or Blackstrap	
60.00		5.5
50.00		4.5
40.00		3.5
	Oats	
60.00	33.3	4.4
50.00	27.8	3.6
40.00	22.2	2.8
	Rye Bran	
50.00	22.6	3.2
40.00	18.0	2.6
	Soybean Meal-fat Extracted	
100.00	13.5	5.0
80.00	10.8	4.0
70.00	9.4	3.5
	Wheat	
90.00	56.3	5.0
80.00	50.0	4.4
70.00	43.7	3.8
60.00	37.4	3.2
	Wheat Bran	
60.00	27.3	5.7
50.00	22.7	4.7
40.00	18.2	3.7
	Wheat Middlings—Standard	
70.00	29.2	6.0
60.00	25.0	5.1
50.00	20.8	4.2
	Wheat Middlings—Flour	
80.00	29.0	5.3
70.00	24.0	4.6
60.00	21.4	3.9

PENNSYLVANIA'S NEW MOTOR LAW

In view of the drastic changes made in the new automboile code, applicants for licenses for the year 1920 are already beginning to familiarize themselves with these and the State Highway Department is daily being importuned to place constructions on the various provisions.

The new act requires from the license applicant comprehensive information concerning the head-light section of the act and it is the intention to refuse the issuance of licenses until this is complied with and all faulty headlights are corrected. This section provides that every motor vehicle shall from one hour after sunset until one hour before sunrise or whenever it is impossible to see clearly for a distance of 200 feet show at least two lights of approximately equal power on the front that shall be clearly visible for a distance of 200 feet. Every vehicle equipped with and using electric light of more than four candlepower shall be equipped with some practical and efficient devices whereby the forward lights may be dimmed or lessened at will so that the reflection therefrom will not interfere with or blind the vision of the driver of an approaching vehicle and it shall be the duty of very operator to apply such dimmer. One red tail light must be used whether the machine is in motion or not and this must be so arranged as to clearly illuminate the registration plate on the rear of each vehicle.

Applicants must be more than 16 years of age and shall be both mentally and physically qualified and it shall be the duty of each registered owner to notify the State Highway Department of any change in his residence, within one week after such change is made. Registration plates must be rigidly attached to the vehicle so that they cannot swing or oscillate, the one on the front and the other on the rear.

They shall be parallel to the axles at all times and they shall not be underneath any part of the body more than 12 inches from the rear end thereof, nor shall they be obscured, bent, altered or defaced and must be clearly legible. In the event of loss or defacement the owner shall within 48 hours after loss apply for new plates.

Any person who has lost the use of one or both hands or one or both feet or whose eyesight is so impaired that with the aid of glasses he cannot distinguish substantial objects clearly at a distance of 150 feet or who shall have less than 20 per centum of normal vision or less than 2 per centum of normal hearing, shall be considered physically incapacitated.

No person shall operate a vehicle while under the inflence of liquor or any narcotic or habit forming drug and in the event of accident the driver shall stop and render such assistance as necessary and upon request shall give his name and address to the injured person. No motor vehicle of any description shall be used or operated on the public highways unless the engine be muffled so that explosions thereof shall not constitute a nuisance to the public and no muffler cut out shall be used on any public highway in any city, borough or incorporated town. No operator who meets or overtakes a street passenger car that has stopped for the purpose of taking on or discharging passengers shall pass said car on the side on which the passengers get on or off until the car has started and until any passengers who may have alighted shall have reached the side of the highway.

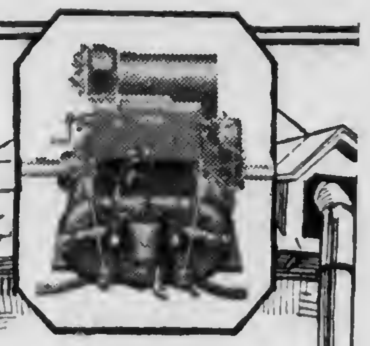
His First Catch

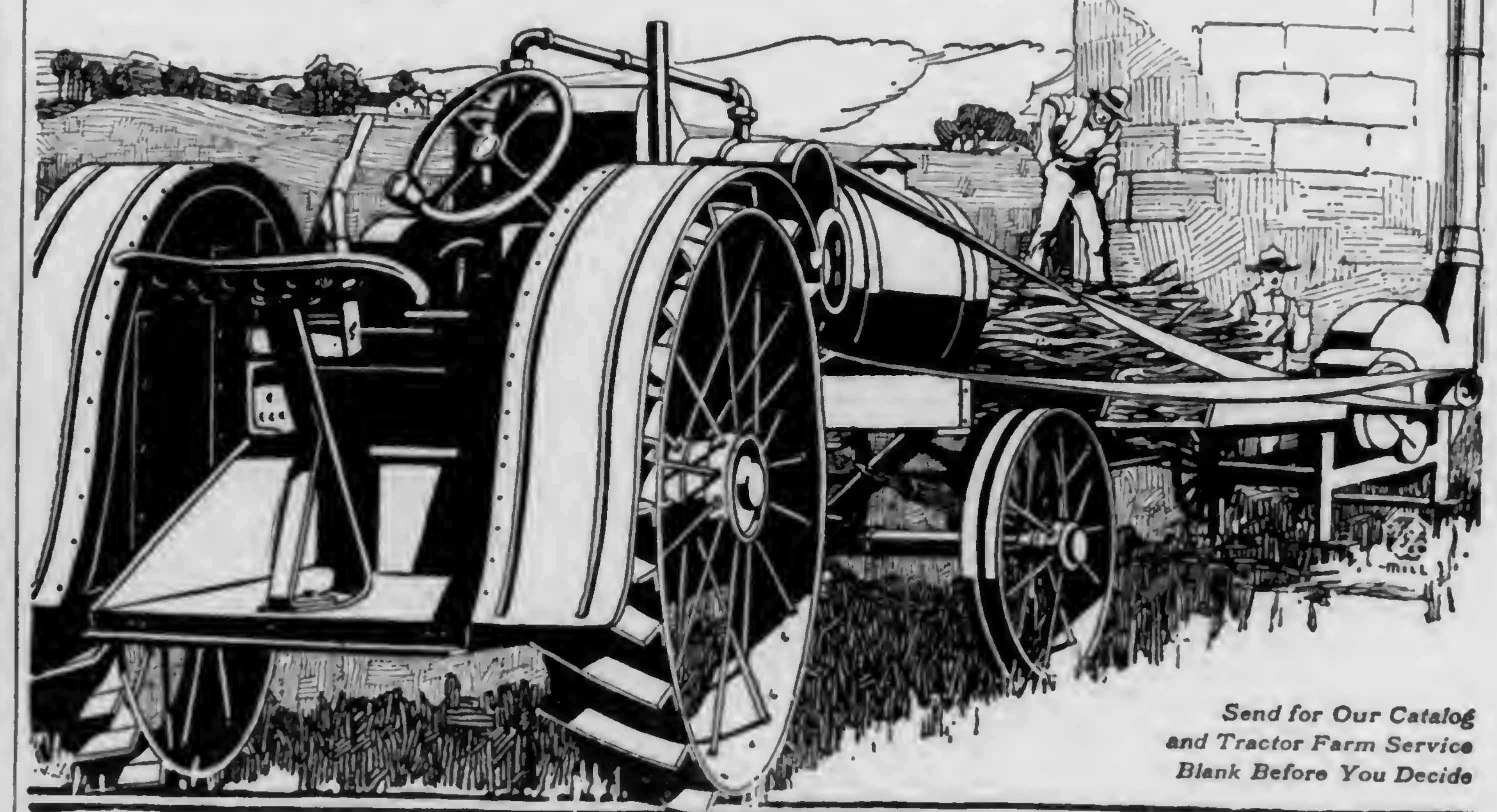
In any proceeding for the violation of this act or for damages growing out of these or operation of a motor vehicle, the registration number displayed on such vehicle shall be prima facie evidence that the owner of such vehicle was then operating the same.

Violation of the provisions of the act shall be classed as a misdemeanor and punishable by such penalties as already provided for.—Pennsylvania Progress.

There were 75,125 unlicensed dogs killed by officers in Pennsylvania during the year 1918. Number of dogs licensed was 362,249.

Every rat costs the farmer at least two dollars per year to board.





The Reliable's Low Speed Engine Makes Easy Work of Your Ensilage Cutting

Running big, thick, hard stalks through your ensilage cutter, for cattle feed, requires just the strong, steady belt power that the Reliable Tractor's 2 cylinder LOW SPEED ENGINE always gives. This heavy-duty engine furnishes a steady flow of strong power which keeps your cutter's knives working at uniform speed—cutting your stalks clean instead of breaking them—and reducing the friction which causes wear.

The Reliable's permanently fastened eighteen-inch clutch pulley is placed on the right side—has plenty of clearance over the front wheel—and runs on the power shaft—making it easy to back the tractor into place for belt work. No need to jack up the tractor or put on any attachments. Merely place the belt on the pulley—pull the clutch—and it is ready for hard work.

With the large pulley and LOW SPEED ENGINE, the Reliable Tractor's engine will give a stronger and more direct power and continue to run longer, with strain, than an equally-rated high speed engine. This combination, by making shorter belt connections possible does away with the need of a long, expensive belt. Lastly, this pulley is operated by the Lassar friction clutch, which gives easy and positive engagement, and picks up the load without placing undue strain upon your machinery. It's a sound farm investment.

THE Reliable Tractor simple and accessible, two-cylinder LOW SPEED horizontal kerosene engine. Cylinders cast enbloc—set side by side—made of special gray iron; walls, ⅝ in. thick; water jacket, 1¾ in. thick. Bore, six inches; stroke, full seven inches. Valves in head give full-powered explosions. Drop forged crankshaft, connecting rod, and camshaft give excessive strength. Three ⅝ inch kerosene-tight piston rings prevent loss of power. Solid phosphorous bronze bushings, and babbit bearings. Six-feed mechanical oiler assures positive lubrication. Dixie water, dust, oil proof high tension magneto with impulse starter. Built in Reliable factory under rigid inspection and micrometer accuracy.

Reliable Tractor & Engine Company
106 Spring Lane St. Portsmouth, Ohio

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A Roof That Resists Rust!

Defies the weather, "needs no paint," lasts a lifetime without repairs. When you build, or re-sheathe use

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HAMPTON ROOFING STYLES:
Pressed Standing Seam, Roll Cap Roofing, 2 V. Crimp, 3 V Crimp, Corrugated 1¼ in. and 2½ in. The Hampton Brand is on every sheet.
Nails and lead washers furnished. Delivery prepaid to nearest R. R. Station. Shipments made twenty-four hours after receipt of order.

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Manufacturers of Sheet Iron, Steel and Hampton Metal Building Material. "Penco" Metal Ceilings, Cornices, Pediments, Urns, Gutters and Conductor Pipes, Ornamental Moulding, Expanded Metal Lath, "Penco" Sheet Lath, Metal Culvert Pipes and other Pressed Metal Specialties.
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EVERY one is a bargain---not in the sense of getting something for nothing---but a real opportunity of securing a good car at a great saving.

We are not second-hand dealers. Each of the following cars has been traded in for Stearns:

Stearns	**Oakland**
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All late models and in good condition.

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Those desiring to ship at once can do so in confidence. We guarantee highest prices and liberal assortments. Our 33 years experience is your protection.

Prices are soaring high right now. This means we can pay you more than ever before. Ship immediately or send for price list. Act quick!

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The season of seasons for raw furs is here. This means "more money" for your catch Mr. Shipper. It also means that it is more important than ever before that you get big money for your pelts. We guarantee to pay highest prices. Our long established reputation is your protection—send for price list today—it's free.

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We want your raw furs. Put your own assortment on them and mail us a copy. If we cannot net you more than you expect, we will return them to you, express paid. Our price list is yours for the asking.

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RAW FURS
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NEW YORK CITY

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RAW FURS

Do your furs bring you as much money as you want them to? Are you disappointed when you get your check? It will pay you to ship your full collection to me. Because of waiting orders which must be filled quickly I will pay the highest prices. Also an extra additional 5% on all shipments over $100. Check will be sent the same day shipment arrives. Send shipment now.

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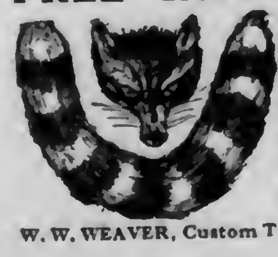
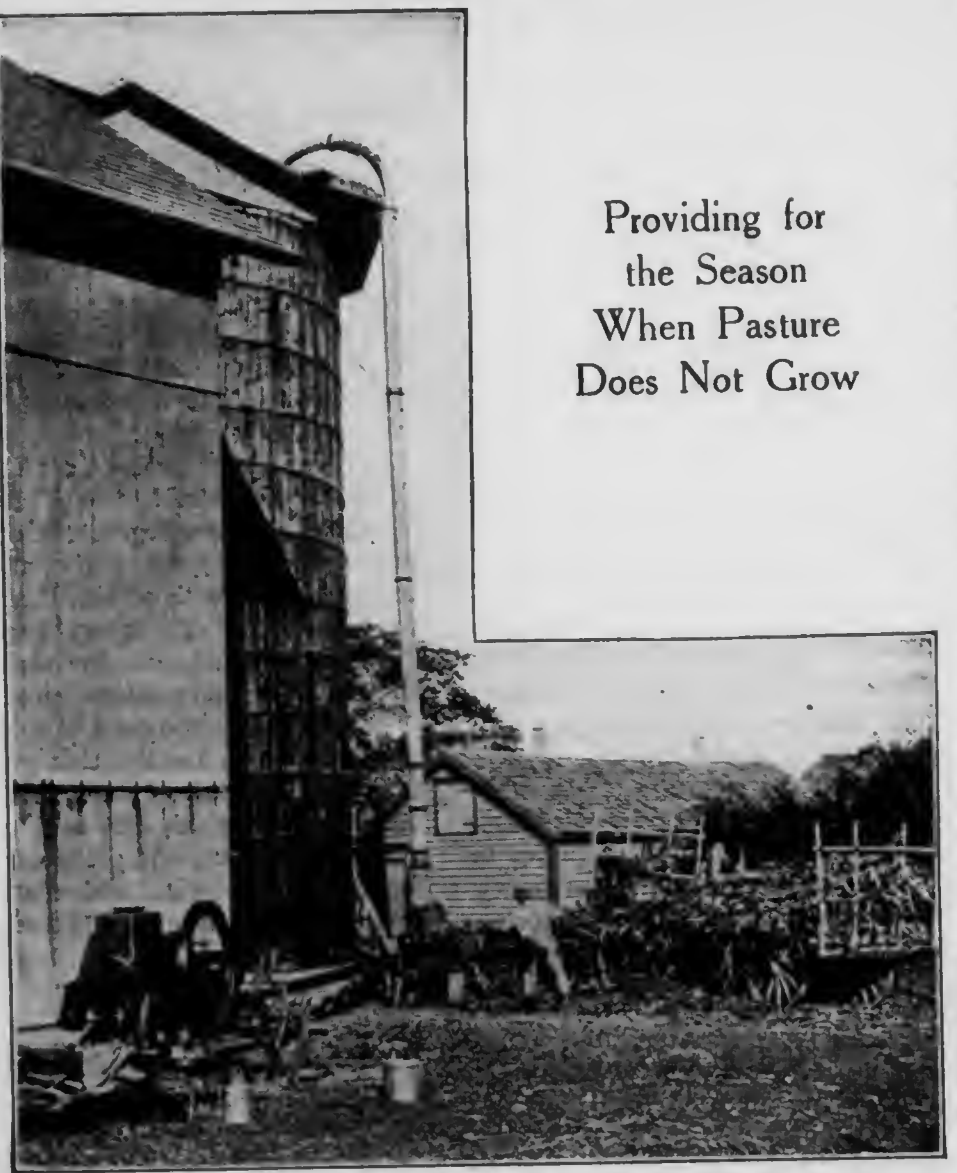


FREE INFORMATION

Largest returns on your small catch of furs. We are tanners and manufacturers of cattle and horse hides for coats, robes, rugs and mittens. Ladies Furs from coon, opossum, fox, muskrats, mink, coyote, badgers, skunk and rabbits. Taxidermist work on deer heads and rugs. Tell us the kind of fur you have and we will answer fully.

W. W. WEAVER, Custom Tanner, Reading, Mich.



Providing for the Season When Pasture Does Not Grow

Nothing comes quite so near to turning December conditions into June for cattle and sheep as the silo. It is the best substitute for pasture grasses yet devised. Cattle and sheep with their great capacity for handling large quantities of coares bulky feeds and a correspondingly insatiable appetite for fresh green forage to supply the demands of their digestive systems derive the greatest benefit alike from the pasture and the silo. Pasture furnishes the ideal feed, the basis of the most economical and efficient rations for producing growth, milk or fat, or for putting weak, emaciated animals into strong thrifty condition. Silage approaches closely to this universal summer feed in economy and efficiency and has the additional value of accurate supply predictions. The man who has a silo full of succulent feed, and twenty cows, can make a pretty close estimate of how long it will last.

Every man who feeds silage should, if possible, feed with the silage some leguminous hay, such as clover or alfalfa hay. A great many have fed silage alone because they did not have hay. However, better results can be had when hay is fed along with the silage. When an effort is made to feed clover or alfalfa hay along with silage it may sometimes seem a little expensive, but when we can grow such crops we not only produce an abundant supply of manure, but these crops help materially in maintaining an adequate supply of nitrogen in the soils where they are grown.

Silage and clover or alfalfa hay, when fed together with some grain, make a much better quality of manure than when corn fodder, timothy hay and grain are the prinicpal feeds. Of course, any kind of manure has some value, but since no farm produces enough manure to cover every field, it is to every farmer's interest to improve the quality, especially if it can be done by a better and more profitable system of feeding. Silage feeders argue that since they save nearly all of the corn plant when it is made into silage they have a great quantity of feed. The silage being very palatable the animals eat more than they do when silage does not form a prominent part of the ration. This means an increased amount of manure. The best feeders find that it pays well to feed silage along with clover and alfalfa hay and some concentrate rich in protein. This not only improves the ration, but it provides for a soil-building crop rotation, thus increasing the amount and value of the manure produced on the farm and insuring a greater return of crop residue to the soil.

Many farmers who are in doubt about the economy of erecting a silo will find the feeding of silage and selling of hay the most practicable solution of the problem. With a good silo and plenty of oat straw and other roughage it is possible to carry stock thru the winter in fairly good condition with a small amount of hay. The selling of hay and feeding of silage is one way of maintaining soil fertility on farms where the soil is better adapted to grass than to other cash crops.

The practice of feeding silage on the beef-breeding farm has come to stay. Practical feeders, experienced with crops and cattle, have tried it and found it profitable.

New silos are going up each year on farms of the most prominent breeders. They are eager to keep their cattle thruout the winter in the sappy, sleek, vigorous condition that accompanies the use of this succulent feed. To the eye silage appears to have a better effect than grain, and to the constitutions of the cattle it contributes much more to health and vitality. And as a fudamental factor, it materially reduces the cost of maintaining the herd and brings the full measure of returns from the land and the corn crop. So whether you aim to surround your cattle with the very best kinds of feed this country affords, and thus secure the greatest possible success as a breeder, or to make your farm sustain the greatest number of cattle per acre and have them make the most from your corn crop, the silo meets your demands. Many farmers are turning their attention anew to raising beef by the silo method.

NEW YORK DAIRYMEN'S CONVENTION

How to improve the quality of dairy products, cost of production the accredited herd plan and feeding stuffs regulation were among the problems that received special attention at the 43rd annual meeting of the New York State Dairymen's Association, which was held in Jordan Hall at the Geneva Experiment Station, Nov. 18-20, 1919.

In his opening remarks President H. C. Troy spoke of the importance of dairying in the state, and said he believed that a saner and more sympathetic attitude on the part of the consumers will make the dairy business safe for the future.

In proof of the need of laying great emphasis upon the dairy industry, Commissioner of Agriculture Charles S. Wilson said that last year the value of our dairy products was estimated at over $298,000,000, representing one-fourth the value of all the agricultural products of the state.

Referring to the work of the State Department of Agriculture in regulating the sale of dairy products, Commissioner Wilson presented figures showing that 75 percent of the shipments of milk to New York City in 1884 were adulterated either by the addition of water or by skimming. A contrast of present conditions with those of earlier days is astounding. Last year, of the milk shipped from upstate into New York City, less than one-half of one percent, showed even a trace of adulteration, and this percentage is based upon an analysis of more than 100,000 lots of milk examined. This is assurance to the consumer that the adulteration of milk offered or exposed for sale within the state has been reduced to a minimum and that he enjoys a maximum degree of protection.

"During the early days of the department, the milk supply for New York City was very much less than at present and was confined in the main to the summer months. Much of the milk at this time was made into butter and cheese and it was not so many years ago that New York boasted of manufacturing more butter and cheese than all the other states in the Union.

"With the increase in population of the cities from year to year, there came an increased demand for liquid milk to supply these cities with this most important food product. Gradually the area supplying New York City has been extended farther and farther up-state until it now goes for its supply to these counties farthest from New York in some cases nearly 500 miles—and there has been consequent reversal from dairying to all year round dairying, to meet the demands for continuous supply of milk throughout the year for city consumption.

"No period of the dairy industry has been fraught with such monotonous problems as the past years. The organization of the dairymen's League including in its membership nearly 70,000 dairymen, with headquarters established in New York City, acting as a selling agency for a large part of the milk produced in this state; an organization of distriubtors known as the New York Milk Conference Board, including in its membership nearly all the large distributors in the different cities of the state; the closing and tearing down of many cheese and butter factories and the diverting of the milk into other channels to meet the increased demand for liquid milk for city consumption, and for condensed and powdered milk; the invention and development of powdered milk; the new law seeking to eradicate tuberculosis from the dairy herds of the state; the present day teachings of Dr. E. V. McCullom on the real food value of milk, and the change in paying for milk and cream from the flat basis by weight or measure to the butter-fat basis, which is not very generally in use—all these have been marked changes, each of which has shed a new light on dairying and it is believed has given greater confidence to those engaged in this branch of agriculture as a profession."

"Production and Distribution of Market Milk" was the subject of an address by William E. Dana, president of the New York State Council Farms and Markets. "When you consider that there are $231,843,400 invested in the dairy farms and cattle of the state, its relation to the economic welfare of the rural population is evident and any consideration of the questions involved in the subject that does not regard the welfare of the citizens on our dairy farms is extremely unwise. Fair and just treatment must be given to the men who have invested millions of dollars in the manufacture, processing and distribution of milk.

"There are two markets for milk, they can be distinguished as the fluid and manufactured. The fluid milk market takes 2,341,401,288 pounds and the manufactured 2,095,531,125 pounds, being practically a 50-50 proposition."

"Every investigation, including the recent trial of the officers of the Milk Producers' Association in the Chicago territory, has established beyond question that the price of milk to the farmer is as reasonable as it can be obtained for. However, it is well for the farmer to remember that if he is to obtain a profit on his business he must conduct it along economic lines. A bulletin published by the Merrell-Soule Company, covering plants in which they manufacture 129,000,000 pounds of milk, shows that the average price paid to the producer by this company is $125.38 per cow but there is a marked difference shown in the figures of the amount per cow received by the highest producing dairy, $225.14 and the amount per cow received by the lowest producing dairy, $54.45. Evidently some of the farmers are receiving a very handsome profit and others doing business at a loss."

The Health Bureau faddists and their fanciful ideas have been the means of increasing the cost of milk, according to Mr. Dana. One large distributor in New York in building a plant in which he wished to comply with all the requirements of the health authorities, consulted them in the erection of his plant and when it was completed, he was required to make changes involving the expedition of upwards of $50,000.

"A very great increase in distribution cost is due to increased wages paid to labor, and everywhere in the distribution of milk is found duplication and waste of effort which results in a largely increased cost of the service to the consumer. In a recent study of the distribution of milk, two firms handling practically the same amount of milk were found, one employing nine bookkeepers and the other twenty-eight. In a study of the up-state cities of approximately the same character we found the price of milk varied from 13 to 16 cents per quart, the original cost of milk being the same in

WITTE DRAG SAW

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A complete power plant for log sawing or ice sawing. Arm Swing leverage and latest improvements. Simple, safe, easy to operate. Engine easy to handle. Saw stays idle until you push the clutch lever. Start slow or fast. Adjustable stroke on saw—180 strokes a minute. Goes anywhere. Does the work of 10 men. Write for description and latest prices, Free.

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Use Your Auto!

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GRIND YOUR FEED
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SHELL YOUR CORN
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ELEVATE YOUR GRAIN

(10)

Ward Work-a-Ford

Can be used with Ford, Overland, Dodge, Reo and Chevrolet 490 cars and Fordson Tractor. Your automobile has a powerful engine—it will outlast the car and you might as well save your money and use it to do all your farm work. No wear on tires or transmission. Hooks up in 3 minutes. No permanent attachment to car. Cannot injure car or engine. Friction Clutch Pulley on end of shaft. Ward Governor, run by fan belt, gives perfect control. Money back if not satisfied. Ask for circular and special price.

WARD MFG. CO., 2060 N St., Lincoln, Neb.

A Good Used Car
Come to the Roman

The Roman, guarantee the lowest prices in the country for a good, first-class, reliable, used car. You get here what you want and when you buy from us you are sure that the car you get is right.

Our stock is now complete, every make known in 1919-18-17 Models.

1000 Autos $300 up

SEND TODAY FOR OUR CATALOG A

It is full of valuable information for the man who expects to buy a car and wants to save real money.

ROMAN AUTO CO.
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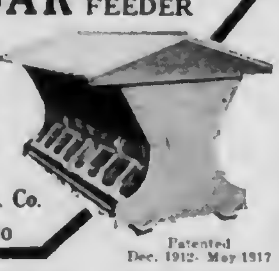

This Feeder Prevents Waste

You can market top-price hogs in a shorter time on less feed with the BLU-BAR self feeder. The agitators bring down feed just as the hog can eat it.

Individual adjusters insure the proper flow of any feed used—coarse or fine. Three bins allow variety in the ration. Troughs built so that it's impossible to eat with feet in the feed—no contamination—no dragging feed out. The

BLU-BAR HOG FEEDER

is now saving feed and time for hundreds of farmers. Built in three sizes for 40 to 200 hogs — and each size large for the price. A postal will bring you full information.

The Blu-Bar Mfg. Co.
Dept. E
SYCAMORE, OHIO

Patented Dec. 1912- May 1917

Clips a Cow in 5 Minutes

That's what the Stewart No. 1 Clipping Machine will do—clip the flanks and udders of a cow in five minutes. Do it every three or four weeks and you can wipe off the parts in a jiffy before milking. Then there is no dirt and filth falling into the milk. This machine clips horses also. Machine complete, only $12.75, at your dealer's or send $2 and pay balance on arrival.

CHICAGO FLEXIBLE SHAFT COMPANY
Dept. A 149, 12th St. and Central Ave., Chicago, Ill.

Save Money, Grind Your Own Feed

With the STAR SWEEP GRINDER—It grinds corn and small grains perfectly. Horse or Belt power. Capacity workmanship fully guaranteed. Takes only a small investment. You buy directly from the factory and pay only one small profit. Write for booklet and prices.

THE PERRY MFG. CO.
3 Jeff St., New Lexington, Ohio

Throwing grain into the manure pit

Grain fed to cows goes to the manure pit to the extent that it lacks in proper balance of protein, carbohydrates and ash necessary to sustain the body and produce milk.

To avoid this waste and furnish digestible nutrition at lowest cost is accomplished by **TI-O-GA Feed Service.** To obtain the proper balance it is necessary to vary the composition of the grain ration with the varying classes of roughage grown on the farm; for some roughage is low in protein while other is high in protein, but the protein is available the same as that contained in the grain.

TI-O-GA Feed Service meets these varying conditions and utilizes to the fullest extent the nutrients in the home grown roughage; first classifying the roughages and then compounding feeds to form a perfect balanced ration with each class:

Red Brand TI-O-GA Dairy Feed to be fed with ensilage, pasturage, green fodder or low protein roughage.

White Brand TI-O-GA Dairy Feed to be fed with medium protein dry roughage.

Blue Brand TI-O-GA Dairy Feed to be fed with high protein dry roughage.

Full feeding instructions and classification of roughage will be found with every bag of **TI-O-GA Feed.** Every bag is guaranteed satisfactory when fed as intended.

Inquire of your dealer. Book on **TI-O-GA Feed Service** containing valuable information on feeding and conservation of home grown feeds sent free on request.

The same careful service is furnished in the preparation of:
TI-O-GA Brood Sow and Pig Feed.
TI-O-GA Growing Shoat Feed.
TI-O-GA Fattening Hog Feed.
TI-O-GA Chick Feed.
TI-O-GA Growing Mash.
TI-O-GA Growing Grains.
TI-O-GA Laying Food.
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TI-O-GA Calf Food.
TI-O-GA Horse Feed.
Colonel's Ration (Full Feed for Horses).

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TI-O-GA FEED SERVICE

Would a Bigger Milk Check Be Acceptable?

This Holstein holds the WORLD'S BUTTER RECORD, 1504 lbs. butter in a year. Perfect health made her record possible.

All you need do is to pay closer attention to cow health. A big milk yield is a genuine health certificate; if the quantity falls off the chances are the cow is suffering from some impairment of her digestive or genital organs—the starting point of nearly all cow ailments.

KOW-KURE is a cow medicine designed to act directly on these vital organs. There is nothing "just as good" for the treatment or prevention of Abortion, Barrenness, Retained Afterbirth, Scouring, Bunches and Milk Fever. For more than a quarter-century it has been used in the most successful dairies. Feed dealers and druggists sell KOW-KURE—in 60c and $1.20 packages. Send for free treatise,

"THE HOME COW DOCTOR."

It gives full instructions on treating cow diseases—should be in every farm library.

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COTTONSEED MEAL and CAKE
PEANUT MEAL --- COCOANUT MEAL

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each city. If the consumers of the cities of the state of New York could receive milk at the same price that Rochester pays there would be a saving of $4,000,000 a year. If the cities in New York State received milk at the same spread that prevails in Ottawa, Can., they would save $25,000,000. In these investigations it was found that the farmer was not the only man in the milk business who kept an inadequate system of books. No individual or corporate distributor of milk was found who could furnish a clear statement of the cost of any operation in their business. The Federal Milk Commission found the same state of affairs existing, in their study of milk distribution throughout the country.

Curtailment of service is sometimes urged as a possible way to reduce distributive costs, but the consumer insists on service. In Rochester the university is supervising a milk station in one of the poorer sections of the city with a dense child population where any one can get bottled milk at 10 cents a quart. Altho there is a saving of 4½ cents per quart by going to the station for milk the tendency is toward smaller sales, altho the wagon trade is increasing in that locality, the housewives preferring delivery service to a reduction in price.

"It is evident," said Mr. Dana, "that no reduction under present conditions can be expected in the price of milk to the producer and if any reduction to the consumer is to be made it must be secured thru economies in distribution. In order that desired economies may be secured these propositions are presented to the public, municipal ownership, municipal assembling and pasturization combined with private distribution, treating the distribution of milk as a quasi public utilities proposition, the spread that the distributor should receive for his services to be regulated by a commission with power to describe character of the service.

"Certainly it seems unwise, in view of the importance to the state that its children should be well grown and nourished and that its inhabitants should have an adequate supply of a food so essential as milk, that the present antiquated condition of the milk business should longer continue. The enabling legislation to secure more economic distribution must be carefully worked out that the rights of all parties interested may be protected. While I do not minimize the difficulties that present themselves in framing such laws, I believe if all parties at interest would approach the matter in a fair spirit a workable law could be devised.

The feeding stuffs problem is a very important one with New York State dairymen, and no one is better qualified to discuss this question than Dr. W. H. Jordan, director of the state experiment station at Geneva. Fifteen years' experience in administering feeding stuffs laws, and his knowldge gained from a laboratory which has examined during the past twenty years not less than ten thousand samples of feeds, gives Dr. Jordan ample basis for sound practical opinion in regard to legislation needed to protect the farmer against the wasteful expenditure of money in the purchase of commercial feeding stuffs.

In his address Dr. Jordan said it was probable that the extensive use of oat hulls first suggested the inspection of feeding stuffs and the necessity of legislation for regulating their control. Laws have been enacted governing the sale of feed stuffs, but they leave the purchaser ignorant of the proportions of the various ingredients in commercial feeds.

The new legislation demanded is for the purpose of supplying to the farmers full information as to what he is buying on the basis of the principle that dairymen and other cattle feeders have the right to know what they are purchasing not only in kind but in quantity. "It is my firm conviction," says Dr. Jordan, "that feeding stuff manufacturers would further their own interests by giving fully to the consuming public all facts possisble concerning their products without being required to do so by law."

Several suggestions which have been made with reference to future legislation are as follows:

1. Guaranteeing the percentage either of the so-called inferior ingredients or of all of the ingredients entering into the compound feeds.

2. Guaranteeing the proportions of the several classes of ingredients, such as high protein feeds, carbohydrate feeds and feeds rich in crude fiber.

3. Requiring a guarantee of the percentage of digestible nutrients in the compound feed.

4. Requiring the separate sale of the materials designated by law as inferior.

5. Exclusion by law of certain very inferior ingredients from the compound feeds and limiting under certain conditions the percentage of crude fiber which a compound feed may contain.

It is claimed that a provision excluding certain materials from compound feeds would not hold in the courts, if it can be shown that these have even a small feeding value, but, according to Dr. Jordan, at a conference of feed inspectors with a committee of the American Feed Manufacturers' Association held recently in Chicago, it was stated that if the law provided that peanut shells, rice hulls, peat sphagnum moss and any other materials of equally low value value should be excluded from compound feeds, this provision would not be questioned in the courts by manufacturers. It is quite probable that this would be the case as any manufacturer would not sacrifice his reputation in demanding the right to use such poor stuff.

It is Dr. Jordan's personal conviction that suggestion No. 5 is the most practicable means of aiding the farmer of any that have come to the front. It is enforcible. It cuts out the worst materials and limits the use of oat hulls, screenings and elevator dust. It is unfortunate that the present practice of compounding feeds was ever instituted, for it violates good economics, both on the part of the trade and on the part of the farmer. It has brought about the sale of materials which should be classed as roughage, as no better than ground straw in mixtures regarded as concentrated feeds. There is no good reason why then refuses should be sent back to the farms under the general title of concentrated feeds.

"The real remedy to be applied to this feeding stuff situation, and perhaps the only effectual one, is the intelligent use by farmers of our existing knowledge concerning cattle foods. They have been buying freely and in increasing quantities mixtures concerning which it is plainly stated that they contain screenings, rice hulls and other low-grade ingredients.—E. E. R.

MOTORIZE THE FARM

AFTER doing much of the market hauling of thirty-two farmers around Eden Prairie, Minnesota, with a motor truck on Goodyear Cord Pneumatic Truck Tires, Mr. C. P. Page states: "I would not use solid tires again under any consideration. Hills, mud and storms don't stop the big, tractive Goodyear Cords. Their cushioning is saving truck repairs and depreciation. They also are saving gasoline and oil. I now haul more milk and other loads in less time, find the work far easier, and note that the pneumatics save our roads. Several people have adopted them as a result of my experience with Goodyear Cords."

THE experience described above affords an excellent example of what pneumatic truck tires are accomplishing for farmers. Every limitation, hitherto placed on the farm use of motor trucks by solid tires, has been removed with the perfected pneumatic tire. For this reason, Goodyear's pioneer work in developing cord pneumatic truck tires has been extremely opportune; it has led to the more extensive use of farm trucks during a serious scarcity of farm labor. Now, farmers are finding it extremely advantageous to employ Goodyear-Cord-equipped trucks with other time-saving motor units and, thus, to motorize their work quite completely. Special information concerning the use of pneumatic-tired trucks on farms may be obtained from The Goodyear Tire & Rubber Company, at Akron, Ohio.

Haul on Pneumatics

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The Money They Think You've Got

All the newspapers say all the farmers have the money. And all the yeggs and all the gangsters and all the other thugs believe them.

They think you've got it, whether you have or not. And good roads and gasoline—and flivvers waiting to be stolen at every curb—have put the farm in easy striking distance of every city slum.

Have you learned the war's great lesson—preparedness? For you—and your family—that means the ten-shot Savage Automatic Pistol. Ten shots—*ten*. Its length of barrel and locking of breech give greater penetration and accuracy than other pistols of the calibre. And the original Savage grip makes you point it and shoot it straight as instinctively as you point your finger—makes you shoot it straight in the dark.

Get a Savage at your dealer's today. You've no idea of the comfort and confidence it will give. For full description write us.

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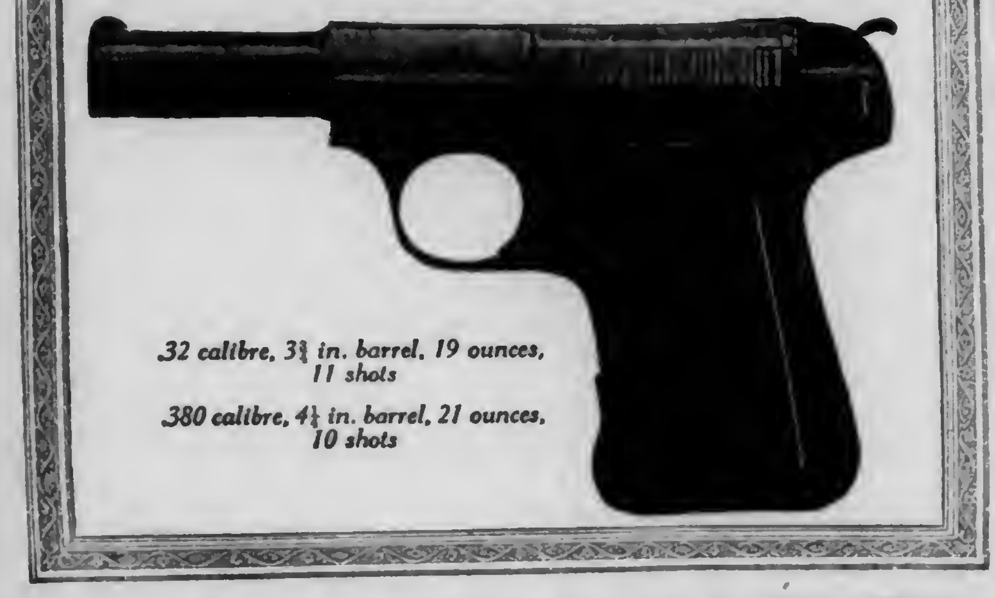

.32 calibre, 3¾ in. barrel, 19 ounces, 11 shots

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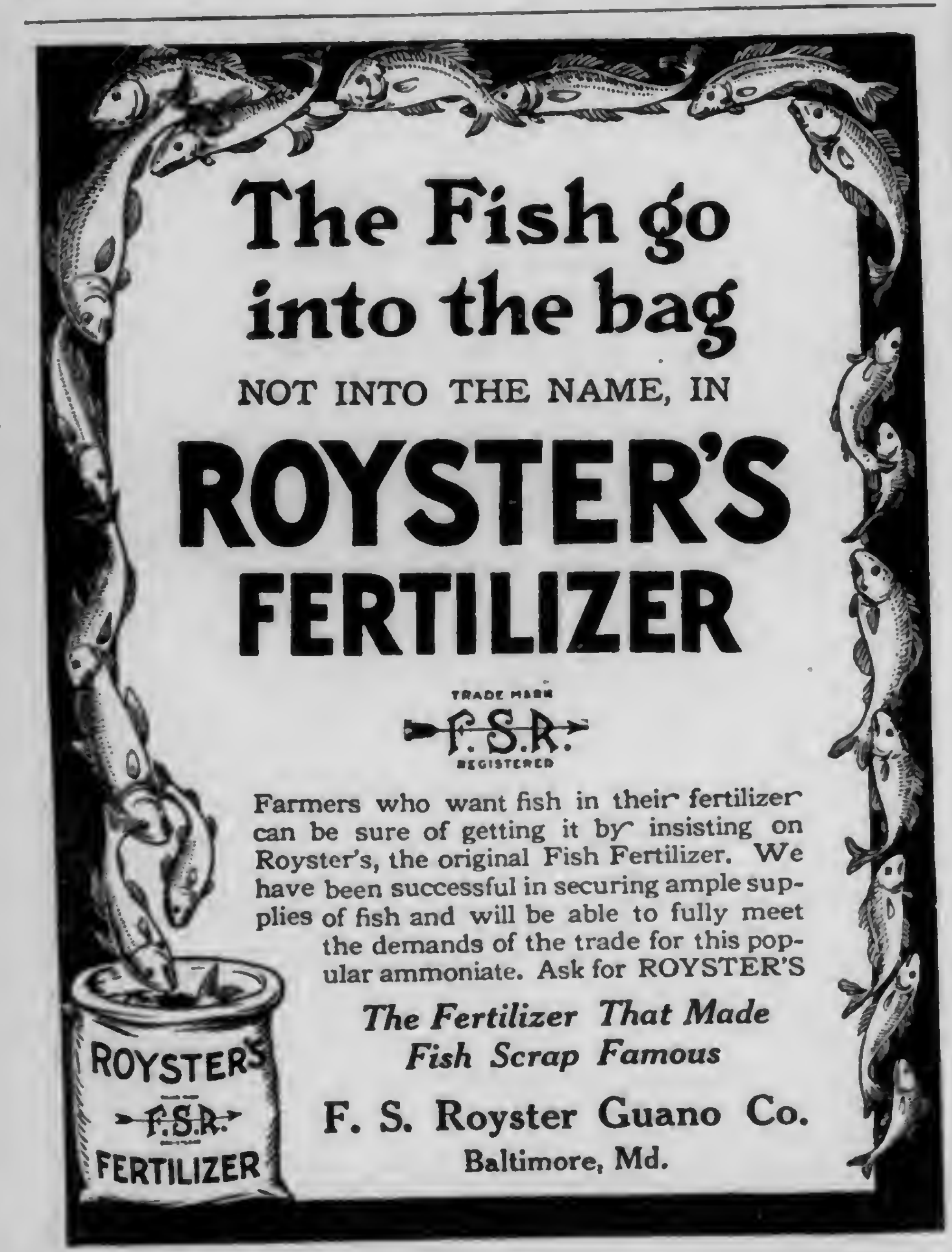

The Fish go into the bag

NOT INTO THE NAME, IN

ROYSTER'S FERTILIZER

TRADE MARK F.S.R. REGISTERED

Farmers who want fish in their fertilizer can be sure of getting it by insisting on Royster's, the original Fish Fertilizer. We have been successful in securing ample supplies of fish and will be able to fully meet the demands of the trade for this popular ammoniate. Ask for ROYSTER'S

The Fertilizer That Made Fish Scrap Famous

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Baltimore, Md.

HORTICULTURE

AN INDIRECT METHOD OF FERTILIZING ORCHARDS

By J. P. STEWART

One of the largest fruit growers in the country, who is located in the state just south of ours, recently told me of an interesting method of fertilization which he is following on a large scale in his orchards. It also possesses the merit of having been selected after considerable experimenting, in which most of the other standard schemes of fertilization were given a fair chance to prove their superiority in adjacent plots.

Pruning Tools

The method which he has adopted is relatively simple. It consists in growing alfalfa as a permanent cover, or so long as it maintains a satisfactory stand between the trees, cutting the alfalfa as often as it is ready and making into hay, feeding the hay to cattle and returning the manure to the trees. This involves considerable labor and some gambling as to the profits of the feeding, but the effects on the growth and general productiveness of the trees have been eminently satisfactory up to date, and in general these effects have not been equalled by any other method tried. Since most of his orchards are on rather steep land, this method has the further merit of largely preventing washing, which might otherwise become very serious.

This method is of interest to the writer chiefly because of the large use that is being made of alfalfa, a crop which several years ago was condemned roundly as being useless and even dangerous in orchards. It also confirms the results of our own experiments, over a ten-year period, in which alfalfa was compared with about ten other possible orchard cover-crops, with the latter combined with annual tillage. In our case, the alfalfa was simply cut and left as a mulch around the trees. This resulted in a greater growth of the trees in the alfalfa treatment during their first ten years than in any other treatment in this particular experiment.

In some of our other experiments in the same orchard, however, in which a combination of mulching with outside materials and additional fertilization was involved, the growth was a trifle better, and the yields were distinctly better than in the alfalfa plot. We have no assurance that this would always be the case, but the differences were sufficiently striking to suggest at least the possibility of similar advantages from similar modifications that might be made in the orchard referred to above. Until these advantages were definitely proved, however, it would not be advisable for the owner to make any sweeping changes in his present treatment, and many of our readers may be so situated as to use his plan to good advantage in their own orchards, either with or without additional fertilization.

PRUNING THE HOME ORCHARD

Pruning the orchard is necessary work which takes considerable time but does not bring immediate returns. Therefore it must be done when it does not interfere with other work. The time for pruning is almost any time when the hours can be spared. The commercial orchardist can plan his work so as to spend much time in pruning at certain seasons, but the general farmer with the small home orchard can raise fruit in the most economical manner if he does the pruning at off hours in any season when he can spare the time.

The necessary tools are the small curved pruning saw, the one-man crosscut saw, double cut pruning shears and small hand shears that work on a coiled spring. Shears on a long pole are handy to head back young trees without climbing from the ground.

From old apple trees take all the dead wood and head them back so that the fruit will not be borne so high that harvesting expenses are increased. Do not trim the apple trees so that they contain long pole-like limbs. Open up the center so that the sun can enter the foliage and color up the fruit. Avoid leaving crotches that are easily broken when the trees are heavily loaded.

Peach trees need a small amount of annual pruning to head them back and keep them from becoming brushy which leads to the production of a small amount of cull fruit. The pruning stimulates the growth of new wood and the peaches are borne on the wood produced during the previous year. If the trees are on a site exposed to the wind, head the new wood toward the wind so the tree will not become lop-sided. This encourages the thrifty growth of branches that head toward the wind and heads back the limbs in the opposite direction; thus making a well balanced tree. Avoid crotches in pruning peaches as the wood is brittle and a tree is ruined when some of the large branches break down when loaded with fruit. The peach tree should also have on open center as the best market demands a peach with a blush and it is the sunshine which paints them with attractive colors.

Pear trees have a tendency to grow upright and they must be encouraged by proper pruning to spread out as much as possible. This gives the tree a larger fruiting surface and makes the fruit easier to reach from the ladder. Keep the water sprouts pruned from pear trees so if a little blight attacks the tree it can be quickly pruned out before it gets down into the trunk. Blight on a sprout only has a short distance to travel before striking the trunk of the tree and killing it.

Plum trees that are properly started do not need much pruning. Cut out all diseased or dead wood and train the trees so they will have a large fruiting surface and not grow too high. The moderate amount of pruning needed by the cherry tree makes it an economical fruit to grow. The main point is to cut all dead wood and branches that cross and prevent the tree from growing so high that the fruit cannot easily be reached from ladder. There is nothing gained by growing cherries on branches so high that only the birds can harvest them.

A Handy Tool for Young Trees

APPLE BLOTCH CONTROL SUCCESSFUL

That apple blotch, a serious fruit disease in Ohio, may be prevented from destroying the fruit of apple trees is brought out in control demonstrations this year in Clearmont, Scioto, Lawrence, Hamilton and Warren Counties. Authorities at the Ohio Experiment Station who have been watching the work believe that spraying with Bordeaux mixture will effect a control, but as yet complete demonstration had not been secured.

The fruit from trees where these demonstrations were held was 90 per cent. free from the disease and the remainder marketable on sprayed trees. On unsprayed blotch trees, 90 per cent. of the fruit was blotched so badly that it was unmarketable.

The system of spraying consisted in applying Bordeaux mixture two, four, six, eight and ten weeks, respectively, after the petals fall. The second and the eight and ten weeks' spray were also for codling moth and contained 1½ pounds of powdered arsenate of lead, in addition to the regular spray which consisted of three pounds of blue stone, five pounds of hydrated lime and 50 gallons of water as a mixture.

The Smith-Cider variety, which is regarded by Experiment Station authorities to be the least resistant of apples against blotch was rather effectively yielding 13 bushels of fruit, while the unsprayed tree yielded only 2 bushels.

Plenty of waxed paper has saved the day on more than one picnic party. A jumbled lunch basket is not appetizing.

It has taken 57 years to make Crew Levick Oil as good as it is today

Nearly every refiner would use—as we do—pure Pennsylvania Paraffine Crude Oil base were it not so scarce. We, however, have our own wells located in the heart of Pennsylvania's best producing belt and these produce the highest grade crude—therefore Crew Levick quality can always be maintained despite the scarcity.

However, Crew Levick quality is not due wholly to fine crude product, for just as the exacting method of the expert chef brings out the delectable something which the cook's method fails to reveal, so the Crew Levick method of refining, developed and perfected during 57 years, extracts all the best lubricating properties from this finest of Pennsylvania oils. And it is this method and product combined that make Crew Levick quality.

Fill up your tractor or automobile with Crew Levick Motor Oil next time and see if it doesn't go further and lubricate better than any other oil you have ever tried.

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Subsidiary Cities Service Co.
New York Chicago Boston Syracuse

CREW LEVICK

WANTED—

Single men to work in large modern dairy barn. 350 head registered Holsteins. Must be good dry hand milkers. Wages $60 per month and board.

We might also use one or two experienced men to feed and milk cows on official test. Wages for this work depending upon experience and ability.

Write stating age and experience also give reference.

WINTERTHUR FARMS, Winterthur, Del.

RHODES DOUBLE CUT PRUNING SHEAR
Cuts from both sides of limb and does not bruise the bark.
Made in all Styles and Sizes
All shears delivered free to your door. Send for circular and prices.
RHODES MFG. CO.
617 S. Division Ave. Grand Rapids, Mich.

PIPE second hand. Large stock all sizes furnished with new threads & couplings. Prompt shipment. J. F Griffith, 416 Meyer St., Phila

HAY Ship To The Old Reliable House
Daniel McCaffrey's Sons
623-625 Wabash Bldg., Pittsburgh, Pa.

WANTED Farm to lease, with option buying. Eastern Penna., 10 to 25 miles market. FELIX BECK, R. 2, Hicksville, L. I.

TELL the advertiser you saw adv. in Pennsylvania Farmer.

Skunk, Mink, Muskrats

and all other kinds of Raw Furs wanted. Write for price-list and shipping tags. Twenty-three years in business.

CHARLES A. KAUNE
290 Bridge Street,
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Trade Mark

Clean Cut Business Farmers and Stockmen wanted as general and local agents, in counties and townships where we are not now represented. Write or call at once.
(The Tix Ton Line for Conserving Animal Life.)
PARSONS CHEMICAL WORKS, *Leona Park Experiment Station, Grand Ledge, Michigan.*

Harvest 20 to 45 Bushel to Acre Wheat in WESTERN CANADA

Think what that means to you in good hard dollars with the great demand for wheat at high prices. Many farmers in Western Canada have paid for their land from a single crop. The same success may still be yours, for you can buy on easy terms.

Farm Land at $15 to $30 an Acre

located near thriving towns, good markets, railways—land of a kind which grows **20 to 45 bushels of wheat to the acre.** Good grazing lands at low prices convenient to your grain farm enable you to reap the **profits from stock raising and dairying.**

Learn the Facts About Western Canada

—low taxation (none on improvements), healthful climate, good schools, churches, pleasant social relationships, a prosperous and industrious people.

For illustrated literature, maps, description of farm opportunities in Manitoba, Saskatchewan and Alberta, reduced railroad rates, etc., write Department of Immigration, Ottawa, Canada, or

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Measure the Land & Weigh the Crop

An accurate knowledge of yields is the best guide to improved farm practice. High prices furnish the incentive to produce more;—high wages make it necessary to keep down the cost per bushel. Increased production and lower cost per bushel can be accomplished by selecting fertilizer on the basis of accurately measured results.

A difference in yield too small to be noticed in the field, often is found large enough when measured to pay the whole fertilizer bill. And frequently gains big enough to pay the bill several times over, result from the use of more and better fertilizer. You can grow bigger crops, and you can cut the cost of production by using the kind of fertilizer that your crops need and that suits your own soil conditions. If you measure the land and weigh the crop,—if you make your selection on the basis of accurate tests,—you will choose an

A·A·C· Fertilizer

Our Agricultural Service Bureau has been carrying on such tests for many years, on farms in many states. These tests were made on all kinds of soils and under a great variety of conditions of rainfall and climate. This Bureau is therefore well equipped to point out a practical solution of your fertilizer problem. It has helped many farmers to determine the best fertilizer for their purposes—and it can help you. Dr. H. J. Wheeler, for many years Director of the Rhode Island Agricultural Experiment Station, is in personal charge of the Bureau. This service is free to you.

"How to Make Money with Fertilizers"

is a valuable book of 56 pages—full of practical information on fertilizers, crops and soils. There are 46 illustrations. It tells you how to select fertilizer for most profitable results—what errors to avoid in buying and using fertilizer. It is a complete fertilizer manual. Every farmer needs it. Our nearest office will be glad to send it free, if you will mention this paper when writing for it.

If there is an agent near you ask him for our crop books. If there is no agent in your town, write us for the name of our nearest agent, or ask for an agency yourself.

The American Agricultural Chemical Co.

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AN IMPORTANT PROTECTIVE AGENCY

By J. P. STEWART

I wonder how many of our readers ever heard of the Federal Horticultural Board. Of those who have heard of it, I wonder how many have any clear idea as to what its business is, and what it is doing to justify itself from the taxpayer's viewpoint. These are some of the questions that were put to me recently, and I found it necessary to engage in a little investigation of my own, before I felt even partially qualified to answer. Perhaps my answer even now will not be satisfactory to everyone and especially not to a certain few who may feel that their regular business has been greatly impeded by its activities.

Incidentally it appears that these few interests and individuals have been able to reach the columns of several of our horticultural publications in a very large and vigorous way so that the average reader is likely to get the impression that the Federal Horticultural Board is chiefly engaged in carrying out the Federal Plant Quarantine Act, the prime object of which is to prevent further introduction of important foreign insect pests and plant diseases, and to eradicate so far as possible the more serious recent introductions which have not yet spread so widely as to make this impossible.

The vital need for such action may be seen in a simple examination of some of the more important pests they are now fighting. These include the pink bollworm of cotton, the white pine blister rust, the European corn borer, the potato wart, the citrus canker, the oriental fruit or peach moth, the so-called Japanese beetle, and the "take all" disease of wheat. All of these pests have come in recently, some of them having apparently eluded the vigilence of the special inspection service maintained by the Board. Some of the older pests which could doubtless have been kept out, or have been eradicated before they had gotten out of bounds, are the San Jose scale, the chestnut blight, and the gipsy and brown tail moths. In the case of the Catten pests, we are now paying the penalty in millions of dollars annually, for the short-sighted policy which left our country totally unprotected against such dangerous enemies for so long.

The present Federal Plant Quarantine Act was passed in 1912, and has therefore been in force for seven years. At the present time there are in force some fourteen quarantines against foreign plants or plant products, seven orders restricting or regulating their entry, and some twelve domestic quarantines.

Probably the most important of these activities is in connection with the pink bollworm of cotton, which is probably the worst enemy of this crop. It has obtained a foothold in Mexico and has also got over into Texas and New Mexico in a few limited areas. Prompt and very thoro clean-up action on the part of the Federal and state authorities, however, has happily eradicated this pest on most of its American locations, and further work now in progress will doubtless complete this apparently hopeless undertaking. A very extensive quarantine against further introductions from Mexico has to be maintained, however, and this has resulted in the development and maintenance of probably the largest fumigation plants in the world, in one of which some 15 cars and their contents can be fumigated at once. This one quarantine requires an annual Federal appropriation of about a half million dollars. In Egypt, in spite of the most strenuous annual clean-up measures, this insect destroys about 15 to 30 percent of their cotton annually.

The quarantine against the white pine blister rust has for its special object the protection of the great pine areas of the western half of the U. S. against infection from the eastern half where the disease is probably firmly established.

The European corn borer, which has obtained a foothold near Boston and also near Albany, N. Y., is to be exterminated at those points if possible, and is to be kept under control in any event. In view of the menace which this insect offers to the principal agricultural crop of America, the importance of this action is self-evident.

The oriental fruit moth, which got into this country first thru a shipment of ornamental cherry trees sent as a gift from the city of Tokio, Japan, to the city of Washington, is now so widely spread in the Potomac valley and other districts as to make its eradication impracticable, but it may still be possible to hold it in check to a large extent. This introduction, moreover, seems to have been made in spite of the most thoro inspection of the stock sent, which resulted in the burning of the entire lot of trees in the first shipment. This illustrates the futility of relying on inspection to keep out all pests, many of which may be unknown or unfamiliar, and shows the necessity for the more radical quarantine action which the Board has recently taken in regard to all such stock, in their quarantine No. 37.

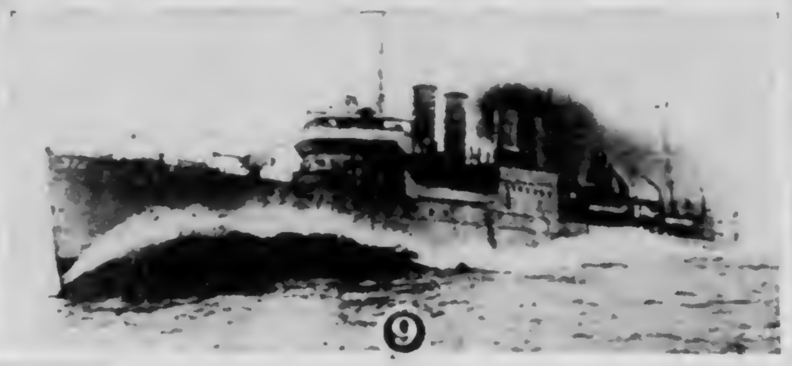
The "take-all" disease of wheat is probably one of the worst plant pests that has yet appeared in this country, probably having gotten in on some experimental wheat introductions from Australia. It has only appeared in a couple of small areas in southern Illinois and Indiana. The disease will be stamped out wherever found if at all possible.

Quarantine No. 37, which has stirred up the recent storm of criticism from certain commercial interests, is simply an extension and general tightening up of restrictions on the introduction of certain plants and seeds, especially ornamentals, which experience has shown to be dangerous and difficult to protect against fully by inspections alone. It will doubtless cause some hardship and cut off some lines of profit from certain limited commercial interests, but on the whole this quarantine is thoroly sound both in principle and purpose, and its enforcement will undoubtedly increase the safety of the plant, fruit and forest interests of the whole country, and in the meantime it is so drawn as to cause as little injury to private interests as possible. Incidentally, its enforcement is already stimulating the production of certain floricultural products for which we have been largely or wholly dependent on foreign interests, and which have been widely proclaimed as impossible of production here.

First thing you know the public will die off from starvation 'er sumthin' and then capital and labor will have had all their trouble for nothing.

Some folks are never happy until something has happened that they can be exasperated about.

PASSING EVENTS IN PICTURES



(Photo. Copyright by Underwood & Underwood)

1.—Harvest Time in Denmark; Showing the Peace of the Scandinavian Clime.

2.—Farmers Teaching their Cattle to Swim the Barge Canal in New York.

3.—A Handsome spotted Deer in the Boston Zoological Park.

4.—Latest Photo of Herbert Hoover, former Food Administrator of the U. S.

5.—Soldiers in the Britsh-India Army. They served in the World War.

6.—An Anti-Profiteering Demonstration in New York, Marching in Hyde Park.

7.—How Grandma Made Yarn to Make the Cloth to Make the Clothes.

8.—Mr. Samuel S. Rogers, Director of the Census.

9.—U. S. Destroyer "Reid," built in 45 Days; A World's Record—at full Speed.

10.—Miss Marguerite Smith, 25 years old, Elected to the N. Y. Legislature.

ONE HOT FOOD FOR SCHOOL LUNCH

By PEARL MacDONALD,
Penna. State College

In a recent issue, we discussed with the readers of the Pennsylvania Farmer the problem of the school lunch.

Cold Lunch Drawbacks

It is quite common experience that when a child carries his lunch to school day after day for several weeks, he frequently loses his appetite and eats little or no lunch. This often results in a craving for certain foods as sweets or pickles or highly seasoned foods that do not furnish the best materials for growth and well-being.

Sometimes, also, the child does not eat sufficient breakfast, either because he does not get up early enough to eat breakfast and reach school on time, or because he has no appetite. The lack of appetite for breakfast may be due to the fact that the child eats too heartily for supper and as a result does not rest well, or that he does not have as many hours of sleep as his growing body requires If the child eats little or no breakfast and if he lacks an appetite for the cold lunch, he is very apt to eat too heartily in the evening—whereas the evening meal for the child should be light.

All of these factors work in a various circle, with the result that the child is not at his best.

Good Results of a Hot Food

The plan of providing one hot dish to supplement the cold lunch brought from home has been tried with splendid results. When the food materials for the hot dish and the lunch brought from home are well selected, the child's appetite invariably improves, he gains in weight, has fewer headaches, is less restless in the afternoon, takes a keener pleasure in his play and work, studies and recites better and makes higher grades.

Since experience shows that one hot dish at school is so benefical to the child, the next problem to determine is how the project may be initiated and carried thru.

Upon the interest and co-operation of the school authorities, the county superintendent of schools, the teachers, the parents and the children depends the success of the project.

The teacher has the greater responsibility. She has the plans to make and the work to oversee. This she cannot do alone but must have the active support of the county superintendent and the school directors to establish the right attitude toward the undertaking among the school patrons and the children.

Fathers and mothers need to support the teacher by providing the equipment, furnishing the food materials, and in helping to carry out her plans.

In preparing and serving the lunch each day and in putting things in order after the lunch, the teacher needs the help of the children.

Equipment for the Cooking

As a rule, county school houses are small and crowded, but by having wall cupboards, folding tables or work shelves, the equipment can be placed and the work done. The older boys can make the cupboards and shelves.

If the heating stove is not of the type that can be used for cooking purposes, and if gas is not available, a two-burner blue flame oil stove will answer. If a portable oven can be donated or purchased, it is possible to prepare a greater variety of dishes.

Such a simple equipment can be secured for $20 to $40, depending upon the quality of utensils. The cost is less if each child brings his own serving dishes—plate, cup, knife, fork and spoon.

Country School Near Pittsburgh, Pa., at Lunch

Money for the equipment may be furnished from funds voted by the school board, raised by school or community entertainments, collected from or contributed by the school patrons. A part or all of the equipment may be donated by one or more families in the district.

The Food Materials

The food supplies may be brought from home each day by the children, or the children may pay for the lunch each day, or a fixed amount for each week.

Eating in Order Helps Digestion and Makes Good Table Manners

The supplies may also be provided in the same way as the equipment; that is, from a fund appropriated by the board or raised by community entertainment or contributed by the patrons.

What to Serve

As to the type of dish to be served, it should be nutritious, palatable and easy to prepare.

Milk is one of the best foods for children because it contains in especially good form material for building and repair of the body, for energy, for regulating the body machinery and for maintaining general well-being and normal growth.

Therefore, a dish made with milk is advisable for the one hot dish for the school lunch.

This may be cocoa or chocolate, a cream soup, a creamed or scalloped dish, or a chowder. Buttered vegetables are good for variety. Such dishes as spinach polenta, rice with tomato sauce, bean stew, etc., are nutritious.

Cocoa or chocolate should be mainly milk and not too strong. Because cocoa and chocolate contain starch, they should be thoroly boiled in water and then added to the scalded milk.

The basis for the cream soups, creamed and scalloped dishes is a white sauce made with milk, thickened and seasoned. The amount of thickening needed depends upon the vegetable or food material with which the sauce is to be combined.

Chowders are also made with milk.

All of these dishes are nutritious and easy to prepare.

Desserts that can be served hot maybe used to give variety—such desserts as baked apples, with milk or cream, fruit tapioca, baked rice pudding and the like.

Planning A Week Ahead

If the school lunch menu is planned a week in advance, it is then possible to let the mothers know what is to be served so that they can plan the lunch brought from home to suit in food value the dish served at school. When the dish at school contains, eggs, cheese dried peas or beans, meat or fish, the sandwiches should be plain bread and butter or fruit or vegetable and vice versa.

Here Are Good Recipes

The following typical recipes to serve 24 people may be helpful. The abbreviations mean: c, cups; t, teaspoon; tb, tablespoon.

White Sauce

Ingredients	Thin	Medium	Thick
Milk	2 qts. or 8 c	2 qt.	2 qt.
Fat	½ c	1 c	1 to 1½ c
Flour	½ c	1 o	1½ to 2 c
Salt	1 tb	1 tb	1 tb
Pepper	1 t	1 t	1 t

Heat milk over hot water. Melt fat and mix with it the flour, salt and pepper. Stir gradually into this mixture scalded milk and continue stirring until mixture thickens. Cook over hot water 15 minutes. Then place directly over the fire and bring to boiling point so as to thoroly cook the starch.

Note.—White sauce made with 2 c. flour is used for croquettes. That made with 1½ c. flour is used for souffles. When food in combination contains a small amount of fat, as vegetable souffles, use 1½ c. of fat, but when food contains large amount of fat, as meat and salmon croquettes, use only 1 c. of fat.

Cream Soups

General Method.—Cook vegetables in boiling water until tender, then rub thru a strainer. Melt fat, add flour, salt and pepper. Add the scalded milk and cook, stirring constantly until thickened. Combine with vegetable pulp.

Note.—If onion is used, add to milk while scalding and remove before making white sauce. Onion may be omitted.

Cream of Carrot Soup

6 c. diced vegetables; 2 qts. water; 2 qts. milk; ½ c. fat; 1 c. flour; 1 tb. salt; 1 t. pepper. Follow "general method."

Cream of Dried Bean or Pea Soup

General Method.—Soak beans or peas over night, drain and add the cold water. Cook until tender, and rub thru strainer. If any fresh vegetables are used, cook and cut vegetables in small cubes, and brown in half the fat; add flour, salt and pepper, and stir into boiling soup. Add milk and remaining fat.

Cream of Lima Bean Soup

3 c. dried lima beans; 4½ qts. water; 1 large onion; 2 carrots; 3 c. milk; 6 tb. flour; ¾ c. fat; 1 tb. salt; 1 t. pepper. Follow "general method."

Scalloped Dishes

General Method.—In a buttered baking dish, place a layer of cooked food material, and cover with white sauce. Repeat until all the materials are used, cover with buttered crumbs and bake in oven until crumbs are brown. If cheese, grated or cut in small pieces is used, sprinkle it over each layer of white sauce. The buttered crumbs are sometimes omitted.

To make buttered crumbs, use 1 tb. butter to 8 tb. of crumbs. Melt the butter and stir in the crumbs.

Rice With Cheese

4 qts boiling water; 3 c. uncooked rice; 2 tb. salt; ½ lb. cheese grated

or cut in small pieces.

Cook the rice in salt water until tender, drain and follow "general method."

Creamed Dishes

General Method.—A creamed dish is made by combining with a cooked food material a medium white sauce. The food material may be vegetable, fish, dried beef, or other meat. In the school lunch, the same proportions of food materials may be used as given in the scalloped dishes.

Corn Chowders

4 c. corn (fresh or soaked dried corn); 6 c. potatoes cut in cubes or small pieces; ¼ lb. salt pork; 1 qt. boiling water; 1½ tb. salt; 1 small onion; 2 qts. milk; ¼ t. pepper.

Try out pork, add onion and cook 5 min. Add potatoes and boiling water and cook until potatoes are nearly done. Add corn and milk, and boil 3 or 6 minutes.

Note.—If soaked dried corn is used, it should be added with the potatoes. The following may be used instead of corn; 4 c. of any cold cooked fish;or 4 c. salt codfish, flaked and soaked about ½ hour in cold water; or 2 doz. clams chopped.

More detailed information is given in Extension Circular No. 79 on "The School Lunch," obtained free of Pennsylvania State College, State College, Pa.

BUYING TOYS AND GAMES FOR CHILDREN

By MAUD BURHAM

A certain little boy was given an electrical train. Very shortly the child ignored the expensive train and preferred to play with the boy next door, whose train was made from cigar boxes and the broken parts of toys contributed by his playmates.

Why? Because they appealed to childish ingenuity.

In buying a toy one does well to study the child's point of view and then to make a selection which will be helpful to his development. Toy manufacturers of today recognize the educational possibilities of the toy and produce many playthings that promote the physical and mental development of children. The coaster cart, kiddie car, erector and anchor architectural blocks serve as illustrations.

The possibilities of certain old and familiar toys and games should not be overlooked. The domino offers valuable aid in number work. The well-known nest of picture blocks is also excellent, and a box of toy money is a real source of education.

If one acquaints himself with the educational toys of the kindergarten he will learn at once the benefit and pleasure to be derived from their use.

For outdoor play, the problem of toys is not difficult to solve, since nature's garden produces much for a child's needs.

Before school days, parents alone are responsible for their children's development. From that time on teacher and parents take up the problem together. Why not give the teacher all the help possible by providing our children with suggestive toys and games which will supplement the school work and develop initiative?

There are many interesting educational games on spelling, arithmetic, history and literature adapted to children of different ages. The well-known game of "Authors" is excellent for older children, since it familiarizes them with the best literature. Stamp collecting also is fascinating, and teaches both geography and history.

Today, educational play is organized not only in our public schools, but on the summer playground. It is the parents' privilege to direct play in the home thro the intelligent selection of toys.

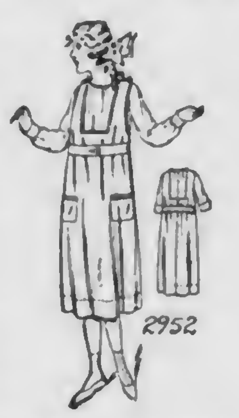
The following circulars and books will be found helpful. All can be supplied by Pennsylvania Farmer at prices indicated.:

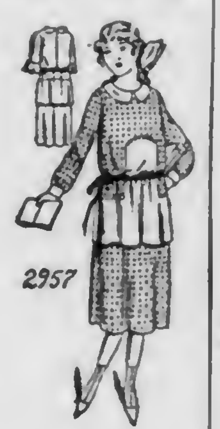
1. Mother Craft Manual, by Mary Read. Price $1.25.
2. Pamphlets, (free), by Bureau of Education-Experiment, 16 W. 8th st., New York City.
3. Republic of Childhood, by Kate Douglas Wiggin and Nora A. Smith.

PENNSYLVANIA FARMER PATTERNS

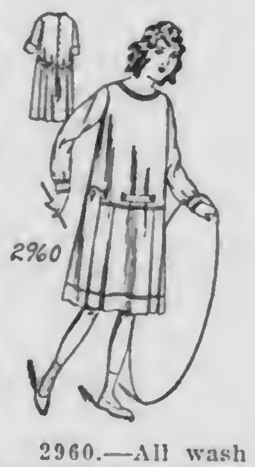
Give figures and letters of each pattern exactly as printed at beginning of each description or we will not be responsible for correct filling of orders. Give bust measure when ordering waist patterns, waist measure for skirt, and age for children's patterns. Address Pennsylvania Farmer, 261 S. Third Street, Philadelphia, Pa.

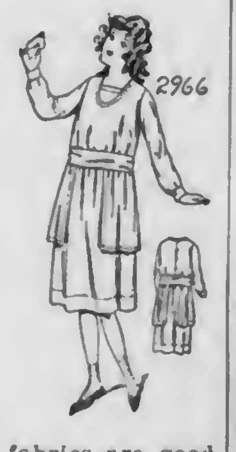
2952.—This design will make a good school dress. The lines are simple and the making is easy. The guimpe could be made of batiste, crepe, or lawn, and the dress of any wash fabric, or of serge, satin, taffeta, gabardine or voile. The pattern is cut in 4 sizes: 8, 10, 12 and 14 years. Size 12 requires 3¼ yards of 36-inch material for the dress, and 1⅞ yard for the guimpe. Costs 10c.





2957.—Checked brown and white suiting and white gabardine is combined to make this blouse dress. The style is good also for serge and for combinations of satin and serge, gabardine and crepe. Wash materials such as gingham, linen and seersucker, are also desirable. The pattern is cut in 4 sizes: 8, 10, 12 and 14 years. Size 12 will require 4 yards of 40-inch material. Costs 10c.





2960.—All wash fabrics are good for this model, likewise serge, gabardine, poplin, repp, voile, plaid and check suiting. The pattern is cut in 4 sizes: 6, 8, 10 and 12 years. Size 10 will require 2¾ yards of 44-inch material. It costs 10c.

2966.—Here is a good model for serge, gabardine, repp, poplin, voile, checked or plaid woolen, and for all wash fabrics. The tunic may be omitted. The pattern is cut in 4 sizes: 8, 10, 12 and 14 years. Size 12 will require 3⅞ yards of 40-inch material. Costs 10c.

It's easy to keep the house warm and comfortable

A Perfection Oil Heater does the trick!

On raw biting days it radiates a glowing atmosphere of warmth that cold can't penetrate. It's a positive necessity if you have rooms not reached by your ordinary heating.

PERFECTION OIL HEATERS

A moderate furnace fire with the Perfection Oil Heater to supplement it means greater economy in the use of coal. No need to have the furnace roaring when you're only using one room—and you can easily carry the Perfection from place to place.

It lights and gives full heat instantly—there's nothing to get out of order—you *can't* turn the wick too high.

Rayo Lamps *There's no glare to a Rayo Lamp. It gives ample light but it is soft and mellow, ideal for reading or sewing.*

Smokeless, odorless and absolutely safe.

Your dealer has *your* model at *your* price. See it today.

THE ATLANTIC REFINING COMPANY
Philadelphia Pittsburgh

USE Atlantic Rayolight Oil in your new Perfection Oil Heater. One gallon will burn for ten hours. Best for Rayo Lamps too. Costs no more than ordinary kerosene.

ATLANTIC Rayolight OIL

STERLING

Let the Sterling Washing Machine do your work. Every woman will be interested in this labor saving device, operated either with gasoline engine or electric motor.

Write today for Free Illustrated Catalog telling all about the Sterling.

SUPERIOR MACHINE CO.
Dept. M Sterling, Ill.

Ro-San Indoor Closet

More comfortable, healthful, convenient. Takes place of all outdoor toilets, where germs breed. Be ready for a long, cold winter. Have a warm, sanitary, comfortable, odorless toilet in the house anywhere you want it. Don't go out in the cold. A boon to invalids. Endorsed by health officials everywhere.

Guaranteed Odorless

The germs are killed by a chemical in water in the container. Empty once a month as easy as ashes. The original closet. Guaranteed. THIRTY DAYS' TRIAL. Ask for catalog and price.

ROWE SANITARY MFG. CO.
12142 Rowe Bldg., Detroit, Mich.

Ask about Ro-San Washstand and Rolling Bath Tub. No Plumbing Required.

HOOSIER STOVES & RANGES FREE

To try in your home 30 days free no matter where you live. Show your friends, send it back at our expense if you do not want to keep it. Million members of families enjoying the comforts and pleasures of "Hoosier" Stoves & Ranges, perfect bakers and heaters, beautifully finished, smooth latest design, guaranteed for years. Write for our big free book showing photographs, describing large assortment of sizes and designs of Steel and Cast Ranges, Cooks, Soft and Hard Coal Heaters, to select from, explaining our free trial. Send postal today.

HOOSIER STOVE CO.
132 State St., Marion, Ind.

Steel Mantle Burners

Increase your Lamp and Lantern Light three times. No smoke. No odor. Fit common kerosene lamps and tubular lanterns.

Every Burner Fully GUARANTEED

If your dealer doesn't keep them send his name and address and your name and address with 40 cents for a Sample. Agents Wanted. Write for FREE Particulars, Today. The season is on.

STEEL MANTLE LIGHT CO.
4027 Cottage Grove Avenue CHICAGO

Indoor Closet $10.85

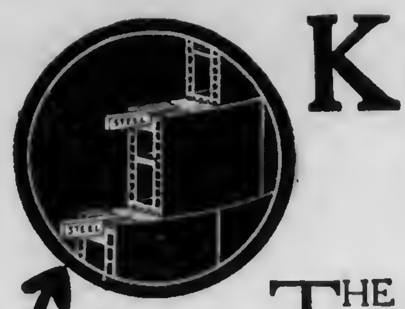
Have a warm, sanitary, odorless toilet in the house anywhere you want it. The Bennett is made of enameled steel with wood seat and lasts a lifetime. Disinfects automatically. Splendid for invalids. Shipped complete ready to operate, all charges prepaid. Satisfaction guaranteed or money back

RAY H. BENNETT LUMBER CO. Inc.
(Home Equip. Dept.) 445 Main St., N Tonawanda, N.Y.

3-in-1 SCREWDRIVER

A handy tool around the house. Length, 3¾ inches. 3 complete screwdrivers in one. Given for 2 subscriptions to Jan. 1, 1921, at 75c. each, or with one renewal and 25c. additional.

PENNSYLVANIA FARMER, Phila., Pa.



Section of Natco Silo wall showing still air spaces and steel reinforcing

Keeping Silage

THE perfect silo must be absolutely air-tight, since air causes silage to mold and rot. The glazed tile walls and tight-fitting cypress doors of Natco Silos seal the silage like fruit in glass jars. It comes out sweet and succulent to the last forkful.

Write us what you intend to build. We have plans for many types of farm buildings—free. Ask for them.

Natco Silos

are strongly reinforced with high grade steel bands, doubled in the bottom courses where the pressure is greatest. The double-shell tile also increases the wall strength and provides for secure mortar joints. The still air spaces conserve the natural heat of the silage—resist frost. Heavy galvanizing protects all exposed ironwork.

Ask your building supply dealer for prices on Natco Silos. Write for FREE book, "Natco on the Farm."

National Fire Proofing Company
1346 Fulton Building Pittsburgh, Pa.
23 Factories assure a wide and economical distribution

Barn and Silo on Farm, Phoenix Bros., Bradford, Ill.

Too Late to Classify

SHUMAKER'S WORLD'S FAVORITE White and Barred Plymouth Rocks and S. C. White Leghorn pullets $3 each, cockerels $4 each. Order now, satisfaction guaranteed. J. H. SHUMAKER, GLENCOE, PA.

FOR SALE 1 Jack, 8 years old, weight about 900, height about 15 hands. Guaranteed sound and sure foal getter. Will sell at a low figure. JOHN C. KOENIG, TARENTUM, PA., R. D. 1, Box 167.

WANTED— at once, or by April 1st, an experienced man, with small family, to take farm on shares, or one by month. Reference. CHAS. J. GARRETT, WEST CHESTER, PA.

For Sale—1 Reg. O. I. C. Boar, 18 mos. old. 1 Reg. O. I. C. Sow, 2 yrs. old, with pig. 1 Grade Sow, 3 yrs. old, with pig. B. A. Corkran, Midlothian, Va.

Large Type Duroc Service Boars and Gilts. Aug. and Sept. pigs. Orlan Cherry King Breeding. D. H. Sager, Basil, Ohio.

FOR SALE—Pure-bred Holstein cows, heifers and bulls, all from high testing dams. Also one pair of good mules. CHAS. J. GARRETT, West Chester, Pa.

UNDER WHAT LUCKY STAR WAS YOUR BABY OR YOUR FRIEND'S BABY BORN?

What do the ancient astrologers predict concerning Baby's future disposition and personality? ROGERS BABY ZODIASCOPE, engraved with Baby's name; beautifully hand painted and embossed; framed in mahogany and crystal glass; size 5 x 6, shows the prediction of ancient astrologers according to Zodiacal Constellation under which baby was born. Designed for babies up to 4 years old. State Baby's full name, age, exact date of birth and shipping address and enclose purchase price when ordering. Price $1, parcel post free. Card giving complete description free on request. JOHN L. ROGERS, Dept. [illegible] 1011 Chestnut Street, Phila.

Bargain in Berkshires

In order to reduce our herd we are offering bred sows, boars ready for service, boar and sow pigs of all ages at prices that will effect a ready sale. If you wish to increase your herd or found a herd of Berkshires, we offer you an excellent opportunity. Your inquiries or visit will amply repay you. CRESTMONT FARM, Sunbury, Pa.

Fur Prices WAY UP

Right now raw furs are bringing tremendous prices. To get the benefit of these high prices, you should ship your furs early to Joseph Ullmann, Inc. A person never knows in these days what the fashion leaders may dictate. Furs at present are all the rage, and while women are wearing them lavishly is the time for you to cash in.

HONEST GRADING—HIGHEST PRICES

are absolutely assured when you consign your skins to us. We grade every skin correctly, so you are sure of always getting the top market price. We pay exactly the prices quoted in our guaranteed price list. Positively no commission charged. We pay express charges and refund postage on mail shipments.

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Drop us a postcard or a letter right now and get our Illustrated Trapping Folder and Guaranteed Price List. Better write us right away.

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MR. WILLITS' ADDRESS

Delivered at Meeting of Tri-State Milk Producers' Association

The Annual Meeting of one year ago was held soon after the Armistice, so that our report at this time starts with the disbanding of the U. S. Food Administration and covers a period during which there has been no governmental regulation. We have endeavored to re-establish the industry upon a permanent peacetime basis, and to retain all the advantages of constructive policies adopted during the war. The average price for 1919 is over 8⅔ cents per quart f.o.b. Philadelphia or about ½ cent per quart more than in 1918. This advance of ½ cent a quart has been in the face of unusually warm weather in January, February, March and April and abundant summer and fall pastures and late frosts this fall. It is therefore no mean accomplishment. Conditions have been so abnormal as to supply and so disturbed as to markets that the officers hope the membership at large feels that this price represents all that could be properly demanded tho we all fully realize the great increase in production costs and our present day labor conditions. The Directors have been called together six times during the year to decide the important questions which have arisen in connection with price adjustments.

With the passing of the Food Administration, Dr. King was appointed Milk Arbitrator for Pennsylvania under the Pennsylvania Council of National Defence (now State Welfare Commission). Lieutenant Governor McClain made this appointment at the direct request of Governor Sproul, the dealers and producers of Pittsburgh and Philadelphia having united in an appeal that this be done. The retail price the past year has been 14 cents a quart for 7 months and 13 cents a quart for 5 months. Thus the retail price in and around Philadelphia has continued to be lower than in other great metropolitan areas of the country, while the price to the producer has been equal to that elsewhere. This condition, so favorable to the consumers, is directly due to the absence of strikes and other disturbances (save the drivers' strike of last January). While the public has shown its appreciation by continuing to buy freely we feel that much greater effort should be put forth to bring to the attention of our consumers, the relative cheapness in comparison with other cities as well as the food value of this life element that we furnish them. To this end, a former member of the Food Administration has been engaged by the Association and the distributors to head up a Publicity Bureau and to cooperate with all educational and charitable agencies. The care of milk while in our hands does not receive enough attention by many of our members who seem not to realize that, collectively, this influences greatly the price we receive. However, we have seen a decided improvement every time this matter has been brought fairly to the attention of our local groups, and we have full confidence of still greater improvement for the future.

During the past year, the Association has been asked to absorb more of the producers' organizations which had been operating in the smaller cities in the Philadelphia territory. We now have a direct part in adjustments in cities like Altoona, Harrisburg, York, Reading, Allentown, Pottsville, Bethlehem and Easton. Naturally this has made much extra work for the officers and has added to our expenses without at present adding a corresponding amount to the commissions received.

Increase in membership has been fairly satisfactory during the year. We now have 10,500 paid up stockholders. Last year we had 6,000. Our Aim for 1920 is 15,000 for there are that many producers within the Philadelphia milk shed and every one outside the organization weakens its efficiency by just that much. You know it, and we don't need to take your time preaching about it. We urge you with all the energy that we have that you individually do your part in this membership campaign. Our field men cannot get these membership figures for you; it must be done in co-operation with local effort and enthusiasm.

In co-operation with the Pennsylvania State Grange, the Dairymen's League, and Dairymen's Co-operative Sales Co., we have proved this year that the Penna. State Legislature and any other like body will listen to farmers if they will all get together to tell it what they want. It passed a bill requiring all Babcock test operators to be licensed and their glassware inspected by the State, and a law providing for the incorporation of co-operative associations of producers. There were two attempts to get the present oleo laws repealed. Both were unsuccessful, tho backed by suspiciously strong interests which were supposed to represent consumers.

Our activities in helping solve the national problems of farmers have been in the National Milk Producers Federation and thru it in the National Board of Farm Organizations. Special mention need be made of only one matter—the Capper Hersman bill—to clearly define the right of farmers to organize for business purposes. This bill needs the active support of all of us. It is a measure vital to the very existence of our organizations to give them sufficient liberty of action to cope with the tremenduous problems that confront us today.

We have resumed peace time independence of policy and action after having almost lost our initiative and to some extent our identity in cooperating with temporary governmental agencies in the face of a great emergency and we have no small satisfaction in "carrying on" this year in that spirit of co-operation with dealer and consumer, the outstanding policy in Philadelphia all thru the war.

Finally friends, we must now make permanent this great ideal of cooperation and this will need the active support of every one. As President Hull told the Michigan Milk Producers the other day, our organization after three years experience has nothing to fear from outside assault—its dangers now lie in selfishness, petty jealousies, and in apathy. We need renewed enthusiasm for discouragements lurk on every side. We need courage and perseverance for the way is still long and often wearisome.

Dig out the barberry, says the Pennsylvania Department of Agriculture, Bureau of Plant Industry. All the evidence that is available indicates that this plant is a very important factor in increasing wheat rust. The Japanese barberry is harmless but the common variety harbors the rust.

When the housekeeper has learned to cease worrying about the things not done she has added years to her life.

THE NEED OF CONCERTED ACTION

Few people seem to realize how farmers are being driven out of business because of conditions in the agricultural industry. For instance, look at the hog market! Notice that the farmer has paid $4.50 per hundred for corn meal, and other grain in proportion, on which to raise them. Now, he is obliged to sell for less than he has paid out for grain. The same with poultry. Thus, due to conditions over which he has no control such as bad weather, floods, etc., some crop which he has grown and on which he has placed quite an expenditure of money and labor, proves an utter failure.

The time has already arrived when hired help on the farm costs more money than the produce will bring when sold. No one can blame the hired man who quits a twelve to sixteen-hour a day job on the farm for a city job of eight hours a day and more pay.

Farm wages have doubled, land values have risen enormously, and altho Attorney General Palmer says that food prices have been lowered 25 per cent., the farmer still pays the same as ever for what he buys. If a remedy cannot be found soon that will alter the existing farming conditions of today, the time will soon come when those who do stick to farming will shut down on production and grow just enough for his own use and no more. This would cause a deplorable state of things for the whole nation, as one can readily see. It seems an incredible thing that all the farmers do not wake up. If they would only study and find the cause, then the effect, and lastly the remedy and how it could best be applied, a radical change could be made for the betterment of all.

Some one must take the initiative as people will never do anything worthwhile without a leader. It has come to my mind lately that women are more efficient than men in this direction of leadership. While attending a large meeting recently it was a noticeable fact that it was always the women who started things and then kept them rolling. The writer believes the men are just as capable, or more so, but they seem inclined to sit back, and even when a good thought does come to them, they are apt to think—"Oh, let the other fellow tell them about it. I don't care to."

If the whole country doesn't sit up and take notice soon, the Bolsheviks, the I. W. W's, and the Anarchists are going to get in full control of everything the world over. The papers state that over 300 Bolshevik schools have been opened in New York city alone. Everyone should realize how the very foundation of the nation is already beginning to totter, and where it will end if nothing is done to quell the disturbances and unrest that has taken such a hold of all the states of the Union as well as the foreign countries.

Agriculture must be recognized as the mainstay of the whole world, and something should be done to promote it and give the farmer a square deal. Of course the consumers are hit too in many ways, but the farmer seems to be the one who receives the most blows a good share of the time by the federal regulations. As long ago as in Washington's time, he recognized the value of agriculture as the foundation of all other industries.—E. M. T. B.

100 Cents on the Dollar

THE tractor that is really a 100-cents-on-the-dollar investment for the farmer is the tractor that can be used practically every day of the year, one that is 100% efficient, both on the belt and the drawbar.

The **International 8-16 kerosene tractor** meets the above specifications. The drawbar has a wide range of adjustment both up and down and sidewise so that the tractor will pull any machine or implement on the farm with equal advantage. The 8-16 pulley is so placed that the tractor can be backed into the belt quickly—so placed also that the belt doesn't rub against any part of the tractor nor drag on the ground. And 8-16 power is just right—neither too heavy nor too light—it *fits* practically any drawbar or belt power task on the average farm.

Aside from its adaptability for all-year-round farm work, the **International 8-16 tractor** is a 100-cents-on-the-dollar investment because of its exceptionally efficient and economical (kerosene) operation; because, too, you can always secure repair and expert service without delay through the 92 branch houses scattered over the United States. Your dealer—wherever he is—has a Harvester branch in easy reach.

If you are interested in a 100-cents-on-the-dollar tractor investment just write your name and address along the margin of this advertisement and mail to the address below so that we can send you full descriptive information of the **International 8-16.**

INTERNATIONAL HARVESTER COMPANY
OF AMERICA INC.
CHICAGO USA

LET US TAN YOUR HIDE.

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KEZIAH COFFIN

By JOSEPH C. LINCOLN

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They entered the house. The dining room was dark and quiet. So was the sitting room. The clock ticked, solemn and slow. Kyan clutched at his companion's arm.

"I don't hear her," he whispered. "You don't s'pose she has done it? Godfreys mighty!"

The gloom and mystery were having their effect, even on Mr. Ellery's nerves. His answer also was given in a tense whisper, but with some irritation.

"Hush!" he murmured. "Let go of my wrist. You've pinched it black and blue. Which room did you leave her in? Show me at once."

Kyan's trembling knees managed to carry him to the little hall leading from the sitting room toward the ell at the side of the house. This hall was almost pitch black. The minister felt his guide's chin whisker brush his ear as the follwing sentence was literally breathed into it:

"Here—here 'tis," panted Kyan. "Here's the door. I don't hear nothin', do you? Listen!"

They listened. Not a sound, save the dismal tick of the clock in the room they had left. Ellery knocked on the door.

"Miss Pepper," he said; "Miss Pepper, are you there?"

Kyan caught his breath. No answer.

"Miss Pepper," repeated the minister. "Miss Pepper!"

Silence, absolute. Abishai could stand it no longer. He groaned and collapsed on his knees.

"She has!" he moaned. "She's done it and there ain't nothin' in there but her remains. Oh, my soul"!

Ellery, now rather frightened himself, shook him violently.

"Be quiet, you idiot!" he commanded. "We must go in. Give me the key."

After repeated orders and accompanying shakings, Kyan produced a key. The minister snatched it from his trembling fingers, felt for the keyhole and threw the door open. The little room was almost as dark as the hall and quiet as still. There was a distinct smell of old clothes and camphor.

"A match," demanded Ellery. "Quick!"

"I ain't got none," quavered Mr. Pepper. "They're all in the box in the settin' room. Oh, my godfreys mighty! What'll I do? What undertaker'll I have? Solon Tripp's the reg'lar one, but Laviny and he had a row and she said she'd come back and ha'nt me if I ever let him touch her rema—Where you goin'? Don't leave me here!"

The minister was going after a match, and said so. In a moment he returned with several. One of these he lit. The brimstone sputtered, burned blue and fragrant, then burst into a yellow flame.

The little room was empty.

John Ellery drew a breath of relief. Then he laughed.

"Humph!" he exclaimed. "She's gone."

"Gone? Why, she ain't nuther! Where could she go?"

"I don't know, but she has gone—somewhere. At any rate, she's not here."

Kyan rose to his feet. His alarm had changed to paralyzed astonishment.

"How could she go?" he repeated. "That window won't open more'n six inches. Laviny aint what you'd call fleshy, but she never could squeeze through that in this world. And I locked the door, 'cause I heard the click. I—I—I—do you b'lieve in spirits, Mr. Ellery?"

"Nonesense! Come into the sitting room, light a lamp, and let's talk it over."

The lamp was found and lighted at last. Its radiance brightened the dingy sitting room.

"Do you b'lieve in spirits?" repeated Kyan. "I've heard yarns about folks bein' spirited away, but I never took much stock in 'em. "And," he added with conviction, "'twould take a pretty husky spirit to handle Laviny if she had her mad up. She— Hush! hear that!"

The sound of wheels was heard in the lane by the front gate. A vehicle stopped. Then some one called a hurried good night. Mr. Pepper's fear returned.

"It's her!" he cried. "She's been ahuntin' for me. Now I'll get it! You stand by me, Mr. Ellery. You got to. You said you would. But how on earth did she get——"

The minister motioned him to silence.

"I'll stand by you," he whispered. "Don't speak. Leave it to me."

A step sounded on the back step. The dining room door was hurriedly thrown open.

"'Bishy" called Miss Pepper eagerly. "'Bish, where are you?"

"Here—here I be, Laviny," faltered Kyan.

His sister appeared on the threshold. She was dressed in her Sunday best, flowered poke bonnet, mitts, imitation India shawl, rustling black bombazine gown. She looked at Mr. Pepper, then at the minister.

"O Mr. Ellery!" she exclaimed, "be you here?"

The Reverend John admitted his presence. Miss Pepper's demeanor surprised him. She did not seem angry; indeed, she acted embarassed and confused, as if she, and not her brother, were the guilty party.

"I'm afraid I'm awful late, 'Bishy," she said. "Have you had your supper?"

Kyan was too perturbed to venture a reply. The sword above his head was quivering on its single hair and he was preparing to dodge the fall. But it did not fall.

"You haven't had any supper, have you?" purred Miss Pepper pityingly. "It's too bad. You poor thing! you must be awful hungry."

She moved across the room and kissed him. Abishai, who had prepared himself for a different sort of greeting, clutched his chair with both hands. He looked as if he might faint. The minister gazed open-mouthed.

"I'm awful sorry, Mr. Ellery," gushed Lavinia removing the bonnet. "You see, I was invited out to ride this afternoon and—and—I went."

She glanced at her brother, reddened—yes, almost blushed—and continued.

"You know, 'Bishy," she said, "Thankful Payne's cousin's home avisitin' her. He come about that cousin's will—the other cousin that's just died. He's a reel nice man—her live cousin is—keeps a shoe store up to Sandwich, and I used to know him years ago. When I was over to Thankful's t'other day, him and me had quite a talk. We got speakin' of what nice drives there was around Trumet and—and—er—well, he asked me if I wouldn't like to go to ride next Sunday afternoon—that's to-day. And a ride bein' a good deal of a treat to me, I said I would. Thankful was goin', too, but—er—er—she couldn't very well. So Caleb—that's his name, you remember, 'Bishy—he come round with his horse and team about ha'f past three and we started. But I'd no idee 'was so late. I—I—meant to tell you, was goin', 'Bish, but I forgot."

Kyan had listened to this recital, or explanation, or apology, with a curious succession of expressions passing over his face. He swallowed two or three times, but did not interrupt.

"I'm so sorry I kept you waitin' supper," gushed Lavinia. "I'll get you a good one now. Oh, well, deary me! I must be gettin' absent-minded I ain't asked you where you've been all the afternoon."

Abishai's eyes turned beseechingly toward his promised backer. Ellery could not resist that mute appeal

"Your brother has been with me for some time, Miss Pepper," he volunteered.

"Oh, has he? Ain't that nice! He couldn't have been in better comp'ny, I'm sure. But, oh, say, 'Bishy! I ain't told you how nigh I come to not gettin' out at all. Just afore Mr. Payne come, I was in that spare room and—you remember I put a spring lock on that door?"

It was here at last. The long-dreaded explosion was imminent. Kyan's chin shook. He braced himself for the blow. The minister prepared to come to the rescue.

"Yes," went on Lavinia. "I—I put a lock on that door so's I—I could shut the room up when I wanted to. Well, when I was in there this afternoon the wind blew the door shut and— Hey?"

"I—I never said nothin'," panted Kyan.

"Yes, it blew to, the lock clicked, and there I was. If I hadn't had the other key in my pocket I don't know's I wouldn't have been in there yet. That would have been a pretty mess, wouldn't it! He! he! he!"

She laughed shrilly. The minister looked at her, then at her brother, and he, too, burst into a shout of laughter. Kyan did not laugh; yet his grip upon the chair relaxed, and over his countenance was spreading a look of relief, of hope and peace, like a clear sunrise after a stormy night.

"Well, I must go and get supper," declared Lavinia. "You'll forgive me for leavin' you so, won't you, 'Bishy?"

Mr. Pepper sighed.

"Yes," he said slowly. "I'll forgive you, Laviny."

"I knew you would. I hope you ain't been too lonesome. Did you miss me? Was you worried?"

"Hey? Yes, I—I missed you considerable. I was gettin' sort of worried. I didn't s'pose you'd go off to ride with—with a feller and leave me all alone. But I forgive you." He stopped, drew his hand across his forehead, and then added, "I s'pose I hadn't ought to complain. Maybe I'd better get used to it; I guess likely this is only the beginnin'."

Lavinia blushed furiously.

"Why, 'Bish!" she exclaimed. "How you do talk! Ain't he awful, Mr. Ellery?"

The Reverend John did not answer. He could not trust himself to speak just then. When he did it was to announce that he must be getting toward home. No, he couldn't stay for supper.

Miss Pepper went into the kitchen and Abishai saw the visitor to the door. Ellery extended his hand and Kyan shook it with enthusiasm.

"Wa'n't it fine?" he whispered. "Talk about your miracles! Godfreys mighty! Say, Mr. Ellery, don't ou ever tell a soul how it really was, will you?"

"No, of course not.'

"No, I know you won't. You won't tell on me and I won't tell on you. That's a trade, hey?"

The minister stopped in the middle of his step.

"What?" he said, turning.

Mr. Pepper merely smiled, winked, and shut the door. John Ellery reflected much during his homeward walk.

The summer in Trumet drowsed on, as Trumet summers did in those days, when there were no boarders from the city, no automobiles or telephones or "antique" collectors. In June the Sunday school had its annual picnic. On the morning of the Fourth of July some desperate spirits among the younger set climbed in at the church window and rang the bell, in spite of the warning threats of the selectmen, who had gone on record as prepared to prosecute all disturbers of the peace to the "full extent of the law." One of the leading citizens, his name was Daniels, awoke to find the sleigh, which had been stored in his carriage house, hoisted to the roof of his barn, and a section of his front fence tastefully draped about it like a garland. The widow Rogers noticed groups of people looking up at her house and laughing. Coming out to see what they were laughing at, she was provoked beyond measure to find a sign over the front door, announcing "Man Wanted Imediate. Inquire Within." The door of the Come-Outer chapel was nailed fast and Captain Zeb Mayo's old white horse wandered loose along the main road ringed with painted black stripes like a zebra. Captain Zeb was an angry man, for he venerated that horse.

The storm caused by these outbreak subsided and Trumet settled into its jog trot. The stages rattled through daily, the packet came and went every little while, occasionally a captain returned home from a long voyage, and another left for one equally long. Old Mrs. Prince, up at the west end of the town, was very anxious concerning her son, whose ship was overdue at Calcutta and had not been heard from. The minister went often to see her and tried to console, but what consolation is there when one's only child and sole support is nobody knows where, drowned and dead perhaps, perhaps a castaway on a desert island, or adrift with a desperate crew in an open boat? And Mrs. Prince would say, over and over again:

"Yes, yes, Mr. Ellery. Thank you. I'm sure you mean to encourage me, but oh, you don't know the things that happen to seafarin' men. I do. I went to sea with my husband for fourteen years. He died on a voyage and they buried him over the vessel's side. I can't even go to his grave. The sea got him, and now if it's taken my Eddie——"

The young clergyman came away from these calls feeling very young, indeed, and woefully inadequate. What did he know of the great sorrows of life?

The Sunday dinners with the Daniels family were almost regular weekly functions now. He dodged them when he could, but he could not do so often without telling an absolute lie, and this he would not do. And, regularly, when the solemn meal was eaten, Captain Elkanah went upstairs for his nap and the Reverend John was left alone with Annabel. Miss Daniels did her best to be entertaining, was, in fact, embarrassingly confidential and cordial. It was hard work to get away, and yet, somehow or other, at the stroke of four, the minister always said good-by and took his departure.

"What is your hurry, Mr. Ellery?" begged Annabel on one occasion when the reading of Moore's poems had been interrupted in the middle by the guest's sudden rising and reaching for his hat. "I don't see why you always go so early. It's so every time you're here. Do you call at any other house on Sunday afternoons?"

"No," was the prompt reply. "Oh, no."

"Then why can't you stay? You know I—that is, pa and I—would love to have you."

"Thank you. Thank you. You're very kind. But I really must go. Good afternoon, Miss Daniels."

"Mrs. Rogers said she saw you going across the fields after you left here last Sunday. Did you go for a walk?"

"Er—er—yes, I did."

"I wish you had mentioned it. I love to walk, and there are so few people that I find congenial company. Are you going for a walk now?"

"Why, no—er—not exactly."

"I'm sorry. Good-by. Will you come again next Sunday? Of course you will. You know how dreadfully disappointed I—we—shall be if you don't."

"Thank you, Miss Daniels. I enjoyed the dinner very much. Good afternoon."

He hurried down the path. Annabel watched him go. Then she did an odd thing. She passed through the sitting room, entered the front hall, went up the stairs, tiptoed by the door of her father's room, and then up another flight to the attic. From here a steep set of steps led to the cupola on the roof. In that cupola was a spyglass.

Annabel opened a window a few inches, took the spyglass from its rack, adjusted it, laid it on the sill of the open window and knelt, the glass at her eye. The floor of the cupola was very dusty and she was wearing her newest and best gown, but she did not seem to mind.

Thro the glass she saw the long slope of Cannon Hill, with the beacon at the top and Captain Mayo's house near it. The main road was deserted save for one figure, that of her late caller. He was mounting the hill in long strides.

She watched him gain the crest and pass over it out of sight. Then she shifted the glass so that it pointed toward the spot beyond the curve of the hill, where the top of a thick group of silver-leafs hid the parsonage. Above the tree tops glistened the white steeple of the Regular church. If the minister went straight home she could not see him. But under those silver-leafs was the beginning of the short cut across the fields where Didama had seen Mr. Ellery walking on the previous Sunday.

So Annabel watched and waited. Five minutes, then ten. He must have reached the clump of trees before this, yet she could not see him. Evidently, he had gone straight home. She drew a breath of relief.

Then, being in a happier frame of mind, and the afternoon clear and beautiful, she moved the glass along the horizon, watching the distant white specks across the bay on the Wellmouth bluffs—houses and buildings they were—the water, the shore the fish weirs, the pine groves. She became interested in a sloop, beating into Wellmouth harbor, and watched that. After a time she heard, in the house below, her father shouting her name.

She gave the glass one more comprehensive sweep preparatory to closing it and going downstairs. As she did this a moving speck came into view and vanished.

Slowly she moved the big end of the spyglass back along the arc it had traveled. She found the speck and watched it. It was a man, striding across the meadow land, a half mile beyond the parsonage, and hurrying in the direction of the beach. She saw him climb a high dune, jump a fence, cross another field and finally vanish in the grove of pines on the edge of the bluff by the shore.

The man was John Ellery, the minister. Evidently, he had not gone home, nor had he taken the short cut. Instead he had walked downtown a long way and then turned in to cross the fields and work his way back.

Annabel put down the glass and, heedless of her father's calls, sat thinking. The minister had deliberately deceived her. More than that, he had gone to considerable trouble to avoid observation. Why had he done it? Had he done the same thing on other Sunday afternoons? Was there any real reason why he insisted on leaving the house regularly at four o'clock?

Annabel did not know. Her eyes snapped and her sharp features looked sharper yet as she descended the steps to the attic. She did not know; but she intended to find out.

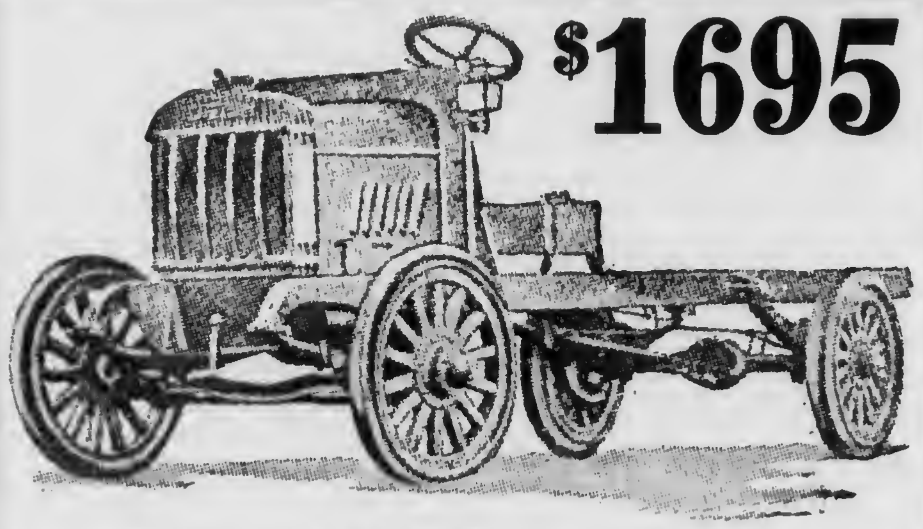
CHAPTER X

In Which Keziah's Troubles Multiply

Keziah was getting worried about her parson. Not concerning his popularity with his congregation. She had long since ceased to worry about that. The young minister's place in his people's regard was now assured, the attendance was increasing, and the Regular church was now on a firm footing, financially and socially, than it had been in years. Even Mrs. Rogers and Lavinia Pepper had ceased to criticise, except as pertained to unimportant incidentals, and were now among the loudest of the praise chanters. And as Captain Zeb Mayo said: "When Didama and Laviny stops fault-findin', the millennium's so nigh port a feller ought to be overhaulin' his saint uniform."

But what worried Mrs. Coffin was John Ellery's personal appearance and behavior. He had grown perceptibly thinner during the past month, his manner was distrait, and, worst of all in the housekeeper's eyes, his appetite had fallen off. She tried all sorts of tempting dishes, but the result was discouraging.

(Continued next week.)



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WASHINGTON NOTES

The end of the special session of Congress provided less legislation for the benefit of the country and the advancement of the public needs than any in the recent past.

Several questions remain to be settled when the first regular session of the Sixty-sixth Congress opens Monday. Aside from the effort that will be made to re-introduce the peace treaty the regular session will be devoted to civil legislation.

Collective Barganing by Farmers.—One of the best presentments received in Washington from Pennsylvania on the question of Collective Bargaining by farmers was a letter to the members of the Pennsylvania delegation from Milk Controller King of the Pennsylvania Council of Public Safety.

Mr. King outlined the impossibility of the farmer or the owner of the small creamery obtaining a fair return for their commodity unless they join to dictate terms, not in the sense that terms have been dictated in labor troubles, but to insure a fair return for the upkeep of their stock and payment of labor.

While collective barganing as a national issue has not met with favor in Washington, collective bargaining for farmers seems to be looked upon differently. It will take a bitter fight, however, before the right of the farmer in this respect will be nationally recognized and every one interested in this question should let his representative in Congress know of his interest.

Railroad Legislation.—On January 1, the President intends to turn the railroads back to the private owners. This will mean increased railroad rates. Legislation is before the Senate, passed by the House, to operate the roads after they are given to their owners Little hope is extended however, that rates will not jump and the result of that will mean higher prices for clothing and food, without a corresponding increase in salaries, further increasing the industrial unrest.

Daylight Saving.—Daylinght saving is developing into perplexing issue. If the plans of the various municipalities are successful one will have to carry a chart when travelling to know when time changes taking on and off the extra hour. During the session of Congress just passed the national law, which made the question uniform, was repealed.

Beef.—Further rumblings are heard in the air of the Capital pointing to further investigation of the beef packers. Investigations of the large packers is becoming an annual custom in Washington. Following the investigation in which the packers come to Washington and admit almost everything charged against them, the probe is closed and the packers go on as usual. A bit of excitement in this world and then forgotten.

Immigration.—Influx of foreigners from Belgium and the farming sections of France is expected here. The coming of farmers from foreign soils who have tilled the soil of their native land has lowered the labor standard on American farms in the past. The French claim the people of their country will not desert it when the labor of every one is needed. The Bureau of Immigration does not seem to fear the consequence of the influx as it will recommend to Congress that no additional immigration laws be passed.

Soldiers' Bonus.—With any number of bills introduced to grant a further bonus to the soldiers and sailors in the World War, little consideration will be given to any of the propositions. The Senate is opposed to the plan on the ground that an additional bond issue will be necessary to pay the boys.—Ellmaker, Washington, D. C., November 24, 1919.

A PERTINENT QUERY

Why do not farm papers more edequately represent the rank and file of the farming population—the average farmer? It is rare indeed to find a true picture of conditions as they actually exist and the replies those girls give the Bachelor are highly refreshing.

Labor papers evidently represent labor—we don't find them emphasizing the high wages received to the exclusion of other factors. On the contrary they make very little mention of the favorable phases of the working man's life. Obviously their object is the ultimate betterment of existing labor conditions and to stress the agreeable feautres would be to defeat their own purpose. Do we find them publishing pictures of the beautiful homes in which some workmen live and enlarging at length upon the modern equipment of these homes? Never. Yet in a farm paper one sees pictures of elaborate farm buildings and equipment to the utter exclusion of even the average variety usually. Is it fair to publish one extreme without publishing beside it the other extreme? Is it not virtually aiding and abetting the greatest menace the present chaotic economic condition presents for the farmer—the false position he holds in the eyes of the consumer? How many of these beautiful farm residences really represent the earnings of the farm? I am sure our vicinity is fully up to the average in prosperity; we are 4 miles from the chautaugua-assembly, 3 miles from the lake, with summer resorts all the way around it, and very conveniently situated for shipping either to Buffalo or New York. There are some nice farm buildings here but they represent a variety of things. In many cases the owners are in debt for more than the value of these things; in others they have inherited the field of their property and their buildings mean the savings of generations; while in some instances the farm is a side line only the living being entirely derived from other sources. I don't know of one case where good buildings with up-to-date equipment represent the profits of the farm and I question seriously if one exisits. Why, oh why, does not the press tell the truth about these things instead of giving the public such erroneous impressions? Every thinking farmer sees the injustice of this course and all would welcome a radical change, headed by our dependable old Pennsylvania Farmer.—E. M. A.

SILOS INCREASING IN PENNSYLVANIA

Statistical information recently collected by the Bureau of Statistics, Pennsylvania Department of Agriculture, shows that approximately 20 per cent., or 43,657 farmers in this State are now using silos. The number one year ago was estimated at 32,000.

The wide-awake and successful farmers learned long ago that a silo, when properly used, was a valuable esset of any farm. As farm conditions improve the number of silos naturally increases.

The Girls Answer

Our readers have shown so much interest in what the girls have to say in answer to "Bachelor's" statements of a few weeks ago that we print more herewith. There is food for thought in these letters.—Editor.

A Mere Man

Altho answers to "Bachelor" should only concern the gentler sex, I am going to try and get thru with a few facts.

It seems to me as if the matter rests with the parents. Parents consider that what was good enough for them, should suffice with their children. Such is not the case.

A great change has come about within recent years and it is now youth's privilege and right to secure a broader view of life.

The large circulation of literature throughout the rural districts, has given the present generation an insight into the advantages of the many methods of improvements for greater ease and comfort. This in turn has created a desire for them and if the parents would only listen to some of the suggestions offered in the way of labor saving devices, it would tend to diminish the discontent of the young people and a greater effort to make life more pleasant.

Of course the financial means may not be available at the time, but what is the expense, compared to the happines and joy of having their loved ones at home, instead of wandering out into unknown parts, alone and unaided, attended by the anxious prayers of those at home who are forever questioning the protection and well being of their little girl?—Benjamin Marsim.

Some Plain Talk

I am a young lady, born and raised on the farm. Both my parents' families lived on farms about two miles apart. My mother and father went to school together, were lovers all their school days and consequently the bond of affection grew so strong, they got married and have lived a most peaceful happy life on the farm where they have made a real home for their seven children and have given us the purest environment.

I began teaching school five years ago and have always tought in our own rural community. My greatest ambition is to start a community center where the young men and women will have a chance to meet and enjoy each other and take some of the grind out of farm life; at least so it will not look so desperate after some recreation.

It is not the lure of the city lights that draws our young people away, as much as the companionship of other young people, and the continual grind of farm work with its long hours, and no suitable recreation. The short hours and large salaries could not help but look alluring to our young folks. They must have recreation and companionship, and time in which to enjoy them.

As to my self, I take a vacation each year and have visited in such large cities as Philadelphia, Pittsburgh, Buffalo, Niagara Falls and many smaller cities of our state. Of course, you meet agreeable, cultured young people and they certainly appeal more strongly to a person than the uncultered people of the country, because they have the advantage of environment and association.

I love the farm and love it far more after visiting a bustling city,

(Continued on page 29.)

Fine old house at Dimock, Pa., owned by F. R. Cope, Jr., successfully heated by a No. 260 Andes One Pipe Furnace. Montrose, Pa.

GENTLEMEN:—I have installed one of your No. 240 Andes One Pipe Furnaces in my house of ten rooms and two halls. I am very much pleased with it.—HOWARD W. HAIN, Rhinebeck, N. Y., March 20th, 1919.

PHILLIPS & CLARK STOVE COMPANY, INC., DEPT. P., Geneva, N. Y.
GENTLEMEN:—Please send me your free, illustrated book, Better Heating for Less Money.
Name ....
Address ....
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Before Winter Sets In Install An Andes—For Comfort

After many winters of laboriously coaxing your present heating system to give you efficient heat comfort, and always falling short of being comfortable, wouldn't you feel 50 per cent. better, right now, today, if you could look forward to the coming winter with absolute assurance of keeping the whole house warm and comfortable in the coldest, windiest weather? *Especially if you also knew that your fuel bills were going to be cut down!*

ANDES SYSTEM ONE PIPE FURNACE
"Better Heating for Less Money"

You can replace your old, *uncomfortable* heating system with the modern, *comfortable* Andes One Pipe System and feel sure that your home will be comfortable all winter long. Do it N-O-W, before winter comes in earnest.

WRITE FOR FREE BOOKLET
Our booklet, "Better Heating for Less Money," will tell you the whole story of the Andes. Surely you will want a copy. Ask for it on the coupon below. It's free.

We *guarantee* satisfaction. If your Andes One Pipe Furnace does not give you complete satisfaction it will be removed and the full purchase price refunded. That's how sure we are of it. Send for the book TO-DAY.

Phillips & Clark Stove Co., Inc.
DEPT. P., GENEVA, NEW YORK
Manufacturers of the Famous Andes Stoves and Ranges

9

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"Reo" Cluster Metal Shingles, V-Crimp, Corrugated, Standing Seam, Painted or Galvanized Roofings, Sidings, Wallboard, Paints, etc., direct to you at Rock-Bottom Factory Prices. Positively greatest offer ever made. At Factory Prices.

Edwards "Reo" Metal Shingles cost less; outlast three ordinary roofs. No painting or repairs. Guaranteed rot, fire, rust, lightning proof.

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197 A. Pennsylvania Money-Maker, $2300,
Handy to schools, churches, stores, R. R. depot, near large city. Black soil fields have grown large corn, grain, potato, general crops; spring-watered pasture for big herd; much wood, timber; estimated enough poles and ties to pay for place; apple orchard, hundreds peach, pear, plum, cherry trees. 6-room house, basement-barn, corn, wagon houses, &c. Aged owner going to live with son gives low price opportunity to hustler. $2300, part cash. Details page 48 Strout's Fall Catalog Farm Bargains 23 States; copy free. E. A. STROUT FARM AGENCY, 1122 BE, LAND TITLE BLDG., PHILADELPHIA.

Good Knox Co. Farms for Sale at $50 to $100 per acre. W. C. ROCKWELL, MT. VERNON, OHIO

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Our competitors say we bid too high—but that's the way we get the most shipments—when the demand is heaviest. We turn our money over several times while our competitors are doing it once. *That's* why we can and do pay the highest prices. *That's* why we are so generous with our grading. *That's* why we charge no commissions. *That's* why we pay spot cash the day the goods arrive—and *that's* why our business is growing by leaps and bounds. If *you* want this kind of a square deal send for our price list at once-today—it's FREE

DAVID BLUSTEIN & BRO.
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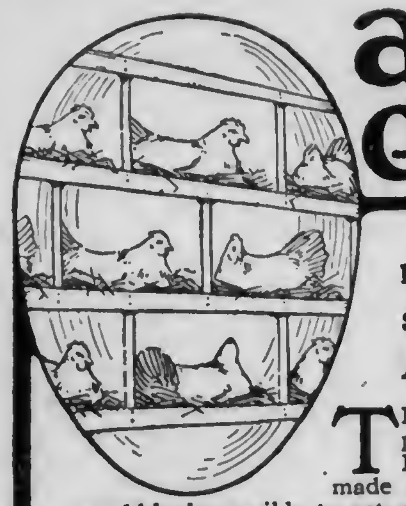
THE CENTER OF THE WORLD'S FUR INDUSTRY

Pennsylvania FARMS Crawford and Erie Counties. Finest land in the country for dairy and hog raising. Good markets and roads, schools. Land $20 to $100 per acre. Send for list. Conneautville R. E. & Farm Agency, Conneautville, Pa.

HARRISONS' NURSERIES Fruit Trees Budde from Bearing Orchards. Peach, apple, pear, plum, cherry, quince, grape-vines, strawberry plants, raspberries, blackberries, evergreens and shade trees. Catalog free. Box 62 Berlin, Md.



an eggmash

modeled after the Pennsylvania Department of Agriculture Formula.

THIS formula is recognized as ideal by expert raisers of poultry. Ubiko Buttermilk Egg Mash contains 9 different ingredients made up into an exactly balanced ration. It would be impossible to get more than a few of these ingredients at your feed store.

UBIKO

Buttermilk Egg Mash

is a cheaper mash than you could mix yourself and it is an unfailing result producer. It is wholesome; it is 90 percent digestible; the lactic acid in its dried buttermilk aids digestion and prevents disease. It contains 19 percent protein; 8 percent ash, mostly from bone phosphates, and only 6 percent fibre. No crushed rock. No alfalfa.

A splendid winter ration consists of feeding sprouted oats, all they will eat in the morning, Ubiko Buttermilk Egg Mash, before them in self-feeding hoppers all the time, and as much good scratch feed at night as they will clean up in litter. This system followed with an abundance of pure fresh water, oyster shells, charcoal, and grit, will insure a steady supply of winter eggs.

(Let us send you a booklet written by an expert poultryman. It is yours for the asking.)

Ubiko Buttermilk Growing Mash. Makes strong, healthy, fast-growing chicks. 15% protein, 10% ash, 6% fibre.

Union Grains. A feed to be considered by dairymen who are not getting the milk production they should. Our record sheet will soon tell you whether the feed you now feed is paying you Union Grains contains 24% protein, 5% fat, and only 10% fibre.

Ubiko Stock Feed. Rich in carbohydrates and perfectly balanced it builds flesh and insures the health and vigor of horses, mules, and dry cows. An excellent substitute for corn in fattening hogs.

Ubiko Pig Meal. Made of tankage and the purest feed meals—an ideal ration for brood sows and a truly wonderful developing feed for pigs. 18% protein, 5% fat, and only 8% fibre.

Our milk and egg cost record sheets will tell you what your feed really costs. Write for them.

THE UBIKO MILLING CO. Dept. P Cincinnati, O. 9

UBIKO
BALANCED RATIONS
For All Farm Stock

5A

Horse Blankets

Give your horse a real treat, protect him with a 5A Storm King blanket. Its large size, 84 x 90 inches, insures a comfortable fit and graceful hang. 5A Storm King Horse Blankets have been the leaders over 30 years. Closely woven from the very best material, their quality and durability is unsurpassed. Outwear three ordinary blankets.

Look for the 5A trademark.
WM. AYRES & SONS, Philadelphia
Makers of 5A Motor Robes

Gombault's Caustic Balsam
The Great French Remedy

THIS Wonderful Liniment, in use for over 30 years, is a most marvelous Human Flesh Healer, and a Sure-Quick-Safe remedy for every known pain, requiring external treatment. Thousands have and thousands more will testify to the wonderful healing and curing powers of Gombault's Caustic Balsam.

Penetrating, Healing, Soothing. Helps Nature to Heal and Cure. One tablespoonful will do more than a whole bottle of any other Liniment. As an external application has no equal for Sores, Wounds, Felons, Burns, Boils and Swellings.

A "365" Day Liniment

Safe and Reliable—for Sore Throat, Chest Cold, Backache, Rheumatism and Neuralgia. Dr. Higley, Whitewater, Wis., writes:—"I have been using Caustic Balsam ten years for different ailments. It has never failed me yet." A liniment that not only heals and cures Human Flesh, but for years the accepted Standard Veterinary remedy of the world. "My right arm was crippled for two years. I spent $500 doctor bills and finally tried Caustic Balsam. My arm is now as good as ever."—E. E. Lowe, Blackburn, Okla. Price $1.75 per bottle at all Druggists or sent by us express prepaid. Write for free booklet and read what others say.

THE LAWRENCE WILLIAMS CO., Cleveland, O.

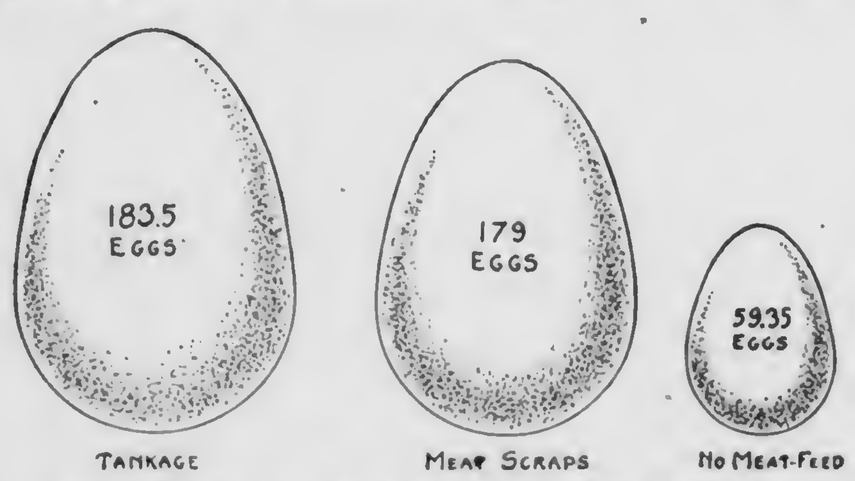
POULTRY

WINTER FEEDING OF HENS

By G. F. HEUSER

Feeding is probably the most important problem now confronting the poultryman. His entire year's profits will be determined very largely by the production during the next five or six months. To produce heavily the birds must be in good physical condition, must have comfortable quarters, must be given a fairly long day and the proper feeds to make eggs. In the case of both pullets and hens the best results will be obtained from the birds that begin the laying year with a good supply of body fat. This stored up food and energy can then be utilized by getting the birds to consume large quantities of a suitable ration. The following mixtures are suggested: For the scratch grain 500 lbs. cracked corn, 200 lbs. barley, 200 lbs. wheat, 100 lbs. heavy oats. For the mash mixture 100 lbs. wheat bran, 100 lbs. wheat middlings, 100 lbs. corn meal, 100 lbs. ground oats or barley, 100 lbs. meat scrap, 3 lbs. salt. These mixtures, particularly the scratch grain can be modified to some extent to meet local conditions. Suggestions in this respect can be obtained from the Poultry Department, New York State College of Agriculture, Ithaca, N. Y.

Every poultryman should fully realize that the mixtures themselves are only half the problem. The method of feeding and proportions of grain and mash consumed are equally, if not more important. This depends entirely upon the mixtures used and should be so understood. With the above ration the birds should consume ⅔ parts of grain to 2 parts of mash by weight. The proportion of mash should be increased as production increases and the season advances until the birds are eating equal parts of grain and mash or even slightly more of mash during the summer season. The amount of mash consumed is regulated by the grain feeding. When the grain is given liberally the mash consumption decreases; when the grain is restricted the amount of mash eaten is increased. Feed very scantily (perhaps about 2 quarts per 100 hens) of grain in the morning and give all the grain the birds will eat in the afternoon in time to find it before dark. (This will be approximately 6 quarts per 100 hens. It is well, however, to keep record of the feed and regulate in that way, giving about ¾ of the grain at night and the rest in the morning or at morning and noon. Also be sure that there is a plentiful supply of clean water, grit, oyster shell and green food.



What Tankage and Meat Scraps do in Egg Production

POULTRY BEGINNER'S MISTAKES

In our poultry business there are so many things that we have done that we would not do again. Some things we have done we should do again. We built some of our colony houses too large and did not build them on skids. When they are moved they have to be lowered on a stone boat with a crowbar or dragged over the ground which gives them a severe strain. In the future all of our colony houses will be of the style that can be pulled around the range by one horse. They will be built on skids.

When we started we had two breeds. One was a Mediterranean breed because they produced large white eggs. The other was the American breed which we liked the best. The two breeds increased our poultry work and kept us under a constant worry during the spring for fear some of the birds would fly on to the wrong range or some one would carelessly leave a gate open. Finally we sold one of the breeds and increased our flocks in the other breed and we have enjoyed our poultry business more ever since. The management of one breed gives us more energy to use in the improvement of the flocks and it makes the selling of hatching eggs a safer business.

One thing that has never been regretted is the care of our new poultry houses. We started in to spray them regularly as soon as they were occupied. The roosts were never left unprotected. The result has been that mites and lice have never caused any trouble in those houses. They have never had a chance to become thoroly intrenched in the cracks and crevices of the buildings and have thus caused no losses and worry.

The birds that we have purchased from old experienced breeders have been a good investment for us. The hatching eggs for which we paid fairly high prices turned out very well and the birds that grew from those eggs have been profit makers. Often it seemed quite a risk to buy high priced hatching eggs and the first two years we did not buy them but obtained rather medium stock. That was a mistake which wasted time for us but we did not realize it then.

Another mistake that we made was the purchase of many birds during our first year instead of half as many or less of much better quality. But we liked to see poultry and wanted to own them and when a large poultry farm in our vicinity started to cull its flocks during the fall we bought over a hundred birds of them. These birds paid a small profit but they were not right for foundation stock and the next three years we purchased a few birds each year of quality and they have been valuable as foundation breeders for developing larger flocks.

We have never made a mistake in attending a poultry institute or lecture by an experienced poultryman. We obtained information from these addresses which was practical. But more valuable than the facts learned was the enthusiasm developed by meeting with men engaged in the same line of business. The stimulation made us think about our own affairs in a new light. We returned home with an increased desire to succeed and improve our own business.

A poultryman to make the most success of his business must get out occasionally and visit with other poultrymen. It helps to wipe away any doubts and blues that may accumulate when a man is working day after day entirely alone. The simple fact that other men have the same problems to overcome sort of makes a man spruce up and fight harder. The daily papers are constantly recording the meetings of business men in various lines. They have their luncheons and conventions. It is evident that all kinds of business men feel that they need to get together at certain times for a little rejuvenation. The poultryman who thinks he is an exception to that rule is making a mistake.

We have never made a mistake in subscribing to a farm journal with a poultry department as reading the articles evenings has been another inspiration in our business. Often we find that we know already the information that we read, but it is a satisfaction to know that other breeders find out the same things that we do. It proves that we are on the right track. In general the poultry business is advancing rapidly and a man must read and study all the time. It is a mistake to assume that everything about the business has been found out so there is no use in reading or studying the farm press.

When we started with our poultry it was hard to believe all the things we read. It sometimes seemed as if hens might get along without oyster shells and animal food and still do fairly well. The balanced ration seemed somewhat like a mystery. But practical experience soon teaches that the things that sound hard are easy to understand when they are thought out and applied. There is a reason for every point regarding poultry management which is now in general use. The beginner who is willing to accept the advice of older poultrymen saves a lot of trouble for himself and after being in the business a few years he easily understands why he was told certain things when he first started.—R. G. Kirby.

IS POULTRY PROFITABLE?

The editor has asked us to tell him if we think our poultry has been profitable during the past year. We have been farming two years. During the past year our flock has averaged forty-seven hens. There are some purebreds among the old hens, Silver Spangled Hamburgs, Rhode Island Reds, and White Leghorns; the younger hens are all mixed breeds. They range from pullets to four-year-old hens. Our hen house is 8½ feet by 12 feet, has a gable roof, a row of one-sash windows on the south, and one door, which in all but severe winter weather is closed by a slat door. Our flock has free range and there is a stream of clear, cold water running thru the yard. One will see the hens stand in the stream drinking on winter days so cold that it makes you shiver to watch them. To this constant supply of water we have attributed much of our success with poultry. The coops in which I raised my chicks were made of scraps of board, packing boxes or anything that would shelter them from the storm. During the year, twelve hens hatched chickens and six of them run with them until they began laying again. I am not giving these facts because I believe in keeping old hens, or mixed breeds, or in small inconvenient houses; but to show that hens can do fairly well with good care even under adverse conditions. There is not time during the year that we expect our hens to entirely pick their living. They get a feed of mixed grain mornings and during most of the year either wet or dry mash at night. We also see that they are well supplied with oyster shells. We did not keep a strict account of feed during the year but did keep sufficient account to know that we were receiving a fair profit.

A Little Pennsylvania Farmer

From November 1, 1918 to November 1, 1919, these hens have laid 457 dozen eggs worth $203.64. This is an average price of 44½ cents per dozen for the year. One of our farm papers recently stated that a hen must lay at least 90 eggs each year to pay for her feed and care. Allowing 90 eggs or 7½ dozen eggs per hen, it took 353 dozen eggs to pay expenses, leaving us 104 dozen eggs at 44½ cents per dozen or $46.28 clear. We also sold 13 young roosters for $9 besides keeping what we want to eat. We have twenty-four pullets to winter.

Some of the chickens we raised this year are purebred Silver Spangled Hamburgs and with what old stock we have we expect to raise mostly Hamburg chicks next year. We intend in the near future to build a modern house for about 100 hens.—Mrs. P. W. Lawton, Tioga County, Pa.

Collect a barrel or two of fine road dust. A bushel of this in a a large box or frame, in a sunny location in the hen house will be greatly enjoyed by the fowls and keep down the body lice.

There's a Lambertville for Every Purpose

SNOW and sleet and the mud of winter are upon us. Lambertville Rubber Footwear will keep you comfortable. A pair of 4-Buckle Arctics will keep out the wet and cold, and protect your leather shoes. On cold mornings they are easy to pull on as they always remain soft and pliable even in bitter weather.

They are pure, new rubber, properly cured. Worn with leather shoes, Lambertville 4-Buckle Arctics will keep out the snow, water and cold. They will save shoe expense and insure comfort.

Other Lambertville Rubber Footwear are:—short boots, hip boots, buckled arctics of varying heights, laced boots or moccasins, and heavy work overshoes—more than thirty styles, all told.

The best dealer in town sells Lambertvilles. *Look for the green label.*

A Green Label on Every Pair of Lambertvilles.

LAMBERTVILLE RUBBER CO. SNAG-PROOF LAMBERTVILLE, N. J.

SNAG-PROOF
7 layers of pure rubber friction lined. Thick and wear resisting yet light in weight.

L-QUALITY
Duck vamp where the wear comes. Pure rubber properly cured.

REDSKIN
Red rubber with friction or felt lining. Tough and long wearing.

LAMCO
Pure gum, ribbed, or with heavy thick vamp.

WHITESKIN
White rubber full duck lined. Made by an entirely new process. Extraordinary value.

LAMBERTVILLE RUBBER CO.
Lambertville, N. J.

PRINCE ALBERT

the national joy smoke

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Toppy red bags, tidy red tins, handsome pound and half pound tin humidors—and—that classy, practical pound crystal glass humidor with sponge moistener top that keeps the tobacco in such perfect condition.

PUT it right up to Prince Albert to produce for you more smoke happiness than you ever before collected! P. A.'s made to fit your smokeappetite like a glove. It has the best flavor and coolness and fragrance, ever!

Just what a whole lot of joy Prince Albert really is you want to find out the quickest way you know how! And, put it down how you could smoke P. A. for hours without tongue bite or parch. Our exclusive patented process cuts out bite and parch.

Realize what it would mean to get set with a joy'us jimmy pipe and to fill 'er up every once and a while. And, puff to beat the cards! *Without a comeback!*

Just as sure as you're reading this, P. A. will hand you everything you ever yearned for in tobacco joy! Why, it's so good you feel like you'd just have to eat that fragrant smoke!

R. J. Reynolds Tobacco Company, Winston-Salem, N. C.

Fistula & Poll Evil

Approximately 10,000 cases are successfully treated each year with

Fleming's Fistoform

No experience necessary; easy and simple; just a little attention every 5th day. Price $2.60 a bottle (war tax paid),—money refunded if it fails. Send for free copy of FLEMING'S VEST-POCKET VETERINARY ADVISER Valuable for its information upon diseases of horses and cattle. 197 pages, 81 illustrations. Write today.

Fleming Bros., Chemists 253 Union Stock Yards, Chicago, Ill.

No! She's Not a Mooley

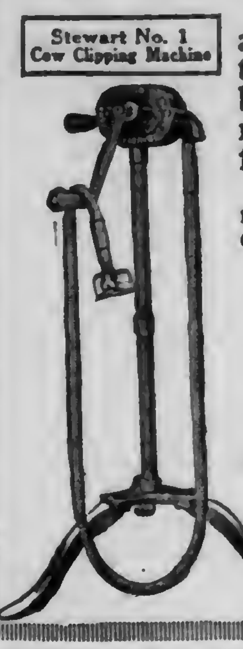
She has been dehorned with a KEYSTONE DEHORNER, making her gentler, safer and more profitable. This also applies to steers. We make Keystone Dehorners, Bull Staffs, and other appliances for dairymen and cattlemen—all sold on a money back guarantee. Write for circular.

M. T. Phillips, Box 127 Pomeroy, Pa.

Keep Milk Free From Dirt and Filth

Long, thick hair on your cows forms a lodging place for dirt and filth. However careful the milker, this dirt cannot be prevented from dropping into the milk.

Stewart No. 1 Cow Clipping Machine



Cows should be clipped on udders, flanks and underline every month during the winter and early spring. These parts may then be easily and thoroughly cleaned before milking, preventing milk contamination from dropping filth.

Clipping is strongly urged by dairy farmers, certified milk producers and federal bureaus. Here is a strong endorsement:

WALKER-GORDON LABORATORY CO.
Plainsboro, N. J., Nov. 12, 1919.

We clip our cows at least once each month. By clipping the flanks, udders and rear portion of the cow, it is possible to groom and wash the dirt from the cow, which would be very difficult to do if the hair is allowed to grow.

WALKER-GORDON LABORATORY CO.
By H. W. Jeffers.

The Stewart No. 1 Clipping Machine will clip a cow in 5 minutes. Hand operated—runs easily—well built—lasts a lifetime. Buy from your dealer at $12.75 or send us $2.00, paying the balance on arrival. Electric clipping machine, direct current, $60; alternating current, $80.

CHICAGO FLEXIBLE SHAFT COMPANY
Roosevelt Road and Central Ave., Dept. 8149 Chicago

CHARACTERISTICS OF THE CHESTER WHITE HOG

In type and general characteristics the Chester White Hog closely resembles the other leading breeds. Years ago breeders placed great stress upon size, but the tendency of modern breeders is toward finer-boned, smoother, quick growing animals. The color is white, and in some cases the hair has a tendency to be curly and wavy. Black and bluish spots frequently occur on the skin. These spots do not indicate impurity of blood, but, if large or numerous, they constitute a serious objection.

The breed had its origin in Chester County, Pa. Large, white hogs were brought into Chester County by early settlers, but little is known of the original source of these importations. About 1820 a white boar was imported from England and mated with white sows of that district. It is claimed by some breed historians that pigs from these matings were the real foundation animals of the Chester White breed.

As the country began to develop in an agricultural way Ohio breeders became interested in improving the breed and had considerable success. While little is known of the animals used in these early breeding operations, it is well known that they produced some excellent animals and the breed began to gain in popularity in the great pork-producing regions. At one time the Ohio breeders maintained a registry association of their own, but in 1894 the articles of incorporation were changed to read American Chester White Record Association. The Ohio Improved Chester White is the product of an Ohio breeder, who in 1865, founded a herd and aimed to develop a superior type of Chester White hogs, but at the leading fairs and exhibitions the animals are all entered as the one breed. The two branches of the breed are so near alike in type and general characteristics that even an expert finds it impossible to distinguish animals of the two lines of breeding.

While a few breeders have attempted to adopt the breed to bacon production, it has in most cases proved unprofitable, because first-class hogs of the bacon breeds are already available. The Chester White Hog is essentially a lard, or fat hog, and compares favorably with the other breeds in early maturity, quality of meat, and the ability to produce a hundred pounds of pork from a given amount of feed. It is claimed by many farmers and feeders that Chester White Sows are somewhat more prolific and better mothers than those of the other fat hog breeds.

The breed is distributed in all parts of the United States, and seems to be gaining in popularity everywhere except in localities where exposed to the hot, blistering sun. It will never become popular in a hot climate, because the white color allows of sunburn and other skin troubles. In the East and Center-West it is very popular on farms where only a few hogs are maintained for the home supply of pork.

The breed shows more extreme variations of type than any of the other breeds, but during the past few years experience judges are finding it much easier to make showing selections, and the tendency is to breed shorter legs, a more compact carcass, and to discourage the coarser, heavier-boned types.

"Big Nelly 2nd"
Grand Champion, Chester White . . at National Swine Show

"Prince Big Bone"
Grand Champion, Chester White Boar at National Swine Show

Some of the leading breed characteristics as described by one of the leading breeders of Chester White Hogs are as follows: Face, nearly straight, wide between the eyes; cheeks, neat and trim; jaws, broad and strong; nose, neat and tapering; jowl, full, smooth, neat and firm, and the head carried up level; eyes, bright, clear and free from wrinkles or fat surroundings; ears, pointing forward and slightly outward; neck, wide, deep and nicely arched; shoulder, broad, deep and full and carrying size down to line of belly; chest, large, deep and roomy, so as to give abundance of room around the heart, and showing good width; back and loin, broad, straight and slightly arched and loin full and wide; belly and flank, same width as back and flank full and even with body; ham and rump broad, full wide and deep with slightly rounding rump, same width as back and making an even line with sides; legs, short, straight, set well apart squarely under body; feet short, tough and free from defects; tail, smooth, tapering and well set and carried in curl; coat, fine, evenly distributed and covering body well; action and style, easy and graceful; disposition, quiet, gentle and easily handled.

The manufacturer can close his plant when production catches up with the demand for his products, the laborer can take a vacation if he cannot get his price, but if the farmer closes down his plant and walks out it will take months to restore it to its former productive capacity—more months than a hungry world could wait. Conditions are sure to clear up presently and then we will need food; therefore, let the farmer go ahead and direct his busines the same as he has been doing for years; only taking care not to run any department so that it will show a loss.

FATTENING RATIONS FOR SWINE

The season is at hand when a great many hogs are being fed out either for the market or to supply pork for home use. With practically all feeds commanding extremely high prices, the question of suitable rations for fattening and methods of feeding is of no little importance. By following the proper system of feeding it is possible to secure maximum gains and at the same time produce economical gains as contrasted to expensive gains in weight from improper and haphazard feeding. In hog fattening, the important thing is to get the hog fat in the quickest possible time and at an economical cost of gain in weight.

First, consider the question of feeds, corn is the feed par excellent for fattening swine. Corn is the one feed upon which the swine industry of the United States has been built. It is excellent feed but is not a perfect one and in order to secure the maximum results from this grain, proper combinations with other materials should be made. Corn is deficient in the substance known as protein and due to the vital nature of this material it must be supplied from some additional feed. In selecting feed to make up this deficiency, one should be selected which will carry a maximum amount of protein and at an economical cost. There are carriers of protein suitable for combining with corn for fattening. Of the materials there is none superior to tankage; an animal by-product rich in protein and very efficient in producing rapid gains, and to reduce the amount of grain required to produce a hundred pounds of gain. In buying tankage, the feeding grade only should be used which has a guaranteed analysis of at least 60 percent digestible protein. Lower grades of tankage are not suitable for swine feeding. In the fattening ration, corn and tankage should be combined in the proportion of 10 or 12 corn to one of tankage. Some may question the advisability of using a material so expensive as tankage, however, it has been demonstrated by accurate experiments that the cost of producing pork can be materially reduced by using tankage due to the lower amount of corn required to produce 100 pounds gain and by producing the gain in a shorter time.

Another protein carrier of considerable promise at the present time is that of fish meal; a by-product from the fish canning business. As a source of protein it closely approximates tankage. Some grades of fish meal contain a very high percentage of bone and such a meal is not desirable for feeding. In purchasing fish meal, it is also necessary to secure the feeding grade, keeping away from the cheaper grade material which is suitable for fertilizer only. For fattening this product should be fed in the proportion of 11.5 of corn to one of fish meal.

Another valuable source of protein is that of linseed oil meal. Excellent results have been secured with this meal, however, it is not so generally used in hog feeding as tankage. Feeding too liberal quantities is not desirable because the oily nature of the feed makes it unpalatable. In a combination with corn, linseed meal should be used in the proportion of six corn to 1 linseed oil meal.

Where dairy products are obtainable, it will be found that good gain can be secured from a combination of skim milk or buttermilk and corn. The nature of these materials make them less obtainable, however, than the preceding materials and their use is somewhat limited because of such. Recently also, the high price being paid for buttermilk for human consumption makes it somewhat out of reach for the hog grower. Where skim milk and buttermilk are being fed, the combination with corn should be made in the proportion of three pounds milk to one of grain. Peanut meal is another source of protein somewhat used for fattening, however, its cost has been prohibitive in recent years.

Occasionally the question arises as to whether or not cotton seed meal should be used. The answer to this must be decidedly no. This material is for some reason or other poisonous to hogs and should not be used in any quantity whatever.

Finally it may be said that the man who fattens hogs most profitably is the man who does not attempt fattening on corn alone, (2) who uses a liberal amount of a good protein carrier to supplement his corn (3) who supplies his hogs with plenty of fresh clean water and who feeds so as to prevent waste of feed and who keeps his hogs at a rapid rate of gain from beginning to finish of the fattening period.

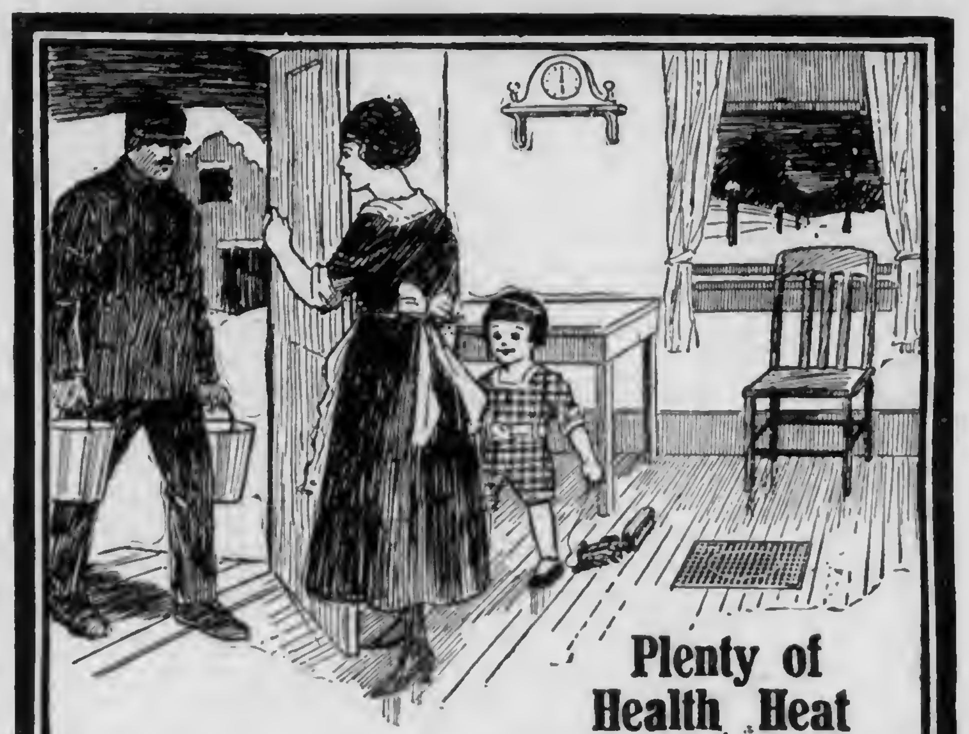
PRIZES FOR MARYLAND'S HAMS

That 14 prizes for hams out of 15 offered at the National Swine Show and Ham and Bacon Show should go to Marylanders, certainly shows that our folks know something about the art of curing. Dr. S. S. Buckley of the State College Extension Service, who has had a great part in Maryland concerning pork curing, was largely instrumental in procuring hams of such excellent quality for the show which closed at Des Moines, Iowa, October 4th.

It was Dr. Buckley who brought back an account of this splendid exhibition and Maryland's part in it. He tells us that the 4th National Swine Show was of great excellence, fully $1,500,000 worth of hogs being exhibited. There were entries from thirty-three states, and the enthusiasm evinced by the many prominent hog breeders attending could not be dampened by the declining price in hogs. From Iowa came a Poland China boar which sold for $10,000. Nebraska had as one of her exhibits ten pigs of a Duroc litter which sold for a total of $6,100.

Because it was late before a decision was made to have a Ham and Bacon Show this season, there were fewer entries made than would have been.

The prizes on hams were awarded as follows: 1st, Dr. Frank W. Keating, Rosewood Training School, Owings Mills, $40. 2nd, Humphrey Wolf, Glenwood, $35; 3rd, Mrs. R. S. Rule, Petersburg, Ill., $30; 4th, Frank Hutton, Cloppers, $25; 5th, G. A. Pound, Cavetown, $22.50; 6th, Dr. W. B. Dent, Oakley, St. Mary's County, $20; 7th, Mortimer Stabler, Sandy Springs, $17.50; 8th, A. L. Hawer, Lantz, $15; 9th, W. W. Mines, Frederick, $12.50; 10th, J. Lawrence Clark, Ellicott City, $10; 11th, H. R. McMann, Sparks, $7.50; 12th, Garnett G. Clark, Ellicott City, $5; 13th, Thos. M. Johnson, Ellicott City, $5; 14th, Doughregan Manor, Charles F. Haight, Ellicott City, $5; 15th, William H. Stinson, Glenwood, $5. Three prizes for bacon out of five were also brought to Maryland: $30; 2nd, Mrs. R. S. Rule, Petersburg, Ill., $27.50; 3rd, Robert H. Miller, Ednor, $25; 4th, W. W. Marlowe, Highland, $22.50; 5th, Mrs. Mary Peterson, Petersburg, Ill., $20.



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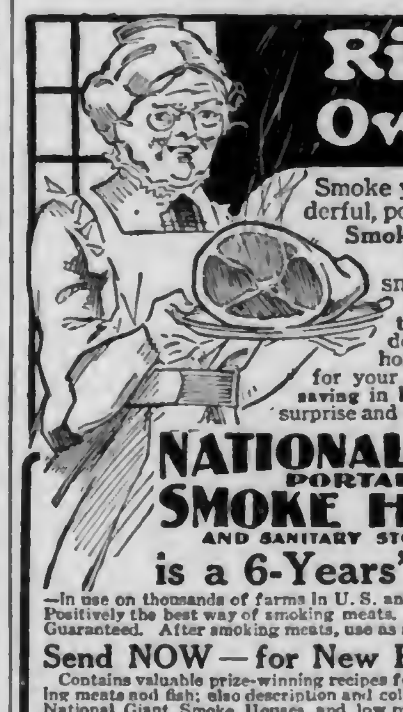

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Markets

PHILADELPHIA PRODUCE

Philadelphia, Pa., Dec. 1, 1919.

Supplies of potatoes continue fully ample for all requirements and with slow trading which has been prevailing for several days past the market is dull and a shade easier. Penna. potatoes are now selling from $2.60 @2.90 per cwt. With some poorly graded lower. N. Y. States are now selling from $2.35@2.50 per cwt. with Maines from $2.50 2.60. There are quite a few Maryland and Delaware Hoosiers arriving and these are selling from $2@2.15 per cwt. The potatoes hauled in by the nearby farmers remain practically unchanged at 80c@$1.10 per ⅝ bu. basket.

Sweet potatoes under lighter supplies are selling at higher prices. There were three cars of Maryland and Delaware sweet potatoes here this morning which sold at $1.65 @1.85 per hamper with No. 2's at $1.15 @1.25. The Eastern Shore barrel stock is in light supply and selling at $4.25@4.50 per barrel for No. 1's with No. 2's at $2.50 @2.75. The nearby New Jersey sweet potatoes are also doing better ranging all the way from $1@1.50 per ⅝-bushel basket, with the outside prices being obtained for fancy house sweets only. Southern Yams are also in light supply and selling at $4.25@4.50 per barrel.

Vegetables

With the season now over on practically all nearby vegetables there are heavier supplies and a greater variety coming from southern points and carload shipments of different kinds of vegetables are being received daily from California, Florida and Louisiana, with smaller lots by express from many other states. There was a car of New Orleans Anise, Endive and Escarole here today all of which were selling at $3@4 per barrel. Six cars of Florida lettuce sold all the way from $2.25@4.50 per hamper. A car and a half of California lettuce sold from $6@6.50 per box. A car of Florida egg plants sold mostly at $2@4 per box. A car of Florida peppers brought all the way from $2.25@3.25 per crate. A car of mixed California vegetables sold as follows: Peas, $12@13 per drum; chickory, $4 per box; cauliflower, $3@3.25 per crate; tomatoes, $1 @1.25 per lug; New York State, Massachusetts and California are supplying most of the onions on our market which are selling from $4.50@5.50 per 100-lb. sacks for the No. 1's, with the No. 2's and picklers at $1.75@2.50 per sack. Spanish Valencia onions are bringing from $2.50@2.75 per crate with the half-cases at $4.75@5. There were also two cars of Florida beans here this morning besides heavy express shipments and prices ranged from $1.50@3 per hamper. Brussel Sprouts are coming from York State and selling from 18@23c per qt. New York state is also supplying practically all of our cabbage ,prices on which are ranging from $50@65 per ton on the Danish Variety, with the Domestic at $40. All of our celery is being furnished by New York state, altho our nearby Pennsylvania farmers are placing their crop on the market. The New York State celery is selling from $3@5.50 per crate in the rough, and when washed and bunched it brings 40@75c per bunch. Carrots are also coming from New York state and selling from $1.80@2 per sack.

The principal vegetables being supplied by our nearby Pennsylvania and New Jersey Farmers are beets, carrots, parsnips, spinach, turnips, besides hot house tomatoes and mushrooms. These nearby vegetables are selling about as follows: Beets, $2@2.50 per barrel, or 2½@5c per bunch; carrots from $2.50@3.85 per barrel and $2.50@3.50 per 100 bunches. Pennsylvania celery is selling from 5@10c per stalk. Parsnips show the wide range of $2.75@4 per barrel. White turnips are bringing from 25@50c per ⅝-bushel basket, with the Yellow Pennsylvanias selling from 60c@$1 per ⅝-bushel basket as to quality. The hot house tomatoes are strong and active at 25@30c per pound for the No. 1's, with the No. 2's at 20c. Mushrooms are showing a wide range in quality, best being in good demand at $2@2.25 per 3-lb. basket, with inferior selling on down as low as $1.25 per basket. Hot house radishes from nearby points are scarce and meeting a good demand at 4@4½c per bunch. New Jersey spinach is showing the effect of the cold weather and most stock is very poor. The very best is selling at 75@85c per ⅝-bushel basket, and poorer grades run down from these prices, with some being hardly salable at 20@25c per basket. Watercress is in light supply and selling all the way from $2@3 per 100 bunches.

Fruits

The market on apples has been showing a weaker and lower tendency for several days past and prices have been slowly but gradually easing off. This had a tendency to shut off supplies and at this writing supplies are much lighter than they have been at any time during the past month or six weeks and there were hardly half as many apples offered here this morning as were being offered one and two weeks ago. Under these lighter supplies the market had a firmer tone today, and it may be that if supplies continue light that the market will regain to some extent the decline that has taken place during the past few days. At this writing prices range about as follows: Baldwins, $4@8; Ben Davis, $4@5.50; Ganos, $4@6.50; Greenings, $4@8; Starks, $4@6; Kings, $5.50@8; Tallman Sweets, $5 @6; Hubs, $4.50@6.50; York Imperials, $4@7; Russets, $5@6.50; various odd varieties, $4@6. Box apples are selling about as follows: Spitzenbergs, $1.75@3; Delicions, $3@3.75; Rome Beauties, $2.25@2.75 per bu.; Anjous, $1.50@2.25; Clarigeaus at $2.25; Beurre Boso at $3.50; Louis Bonds at $3.25; Duchess, $1.75@2 A few strawberries have made their appearance from California and sold from 80@85c per pint. Cranberries remain about steady at $2@3.25 per crate. There have also been a few Florida pineapples in the market which sold from $5.50@6.50 per crate.

Poultry

With the Thanksgiving holidays over the market on both live and dressed poultry is less active and prices are somewhat lower. At this writing live poultry are selling about the following range of prices; Heavy fowls, 30@32c; inferior, 24@28c; fancy chickens, 26@28c; inferior, 23@25c; roosters, 21@22c; ducks 25@34c; geese, 24@26c; turkeys, 36@38c; dressed poultry, turkeys, nearby, 42@48; western turkeys, 40@48c; heavy fowls, 35@36c; small sizes, 25@32c; nearby broilers, 43@48c; other broilers, 35 @48c; ducks, 38@42c.

Eggs

Under the continued light supplies eggs have been advancing almost daily and prices are much higher than were prevailing previous to the holidays. Pennsylvania and other nearby current receipts are now selling at 80c per dozen with firsts at 82c; western firsts are bringing from 78@80c with extra firsts at 82c.

There is a good active demand for rabbits at about the following prices: Cottontails, 60@85c per pair and Jack rabbits, $1 @1.75 per pair.

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LANCASTER PRODUCE MARKET

Lancaster, Pa., Dec. 1, 1919.

Produce business was dull here today altho prices were held. The offerings were small, and the curb market was one of the slimmest in many months. Altho eggs were over abundant, they were held rigidly at 80 cents a dozen, while dressed poultry declined under a groggy demand..

Butter and Eggs.—Creamery butter, 75@80c lb.; country butter, 80c; eggs, 80c doz.; duck eggs, 60c; goose eggs, 10c each.

Poultry.—Dressed old chickens, $1.40@1 90 each; dressed young chickens, $1.25@1.50. No live fowls offered.

Vegetables.—Beets, 5c bunch; beans, 10 @12c ½ pk.; lima beans, 20c qt;. cabbage, 10@12c head; sweet potatoes, 35c ½ pk.; potatoes, $1.65@1.75 bu.; do., 25@30c ½ pk.; turnips, 15c ½ pk.; spinach, 20c ½ pk.

Fruits.—Apples, 35@50c ½ pk.; pears, 20@25c ½ pk.

Grain Market.—Wheat, $2.20 bu.; corn, $1.05; oats, 75c rye, $1.60. Timothy hay, $28 ton; mixed hay, $26; wheat straw, $11; oat straw, $10.

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YORK PRODUCE MARKET

York, Pa., Dec. 1, 1919.

Prices ruled firm on practically all lines of produce but the demand was light in potatoes and eggs. It would seem that there is a large quantity of cold storage eggs being consumed in the city. In the fruit market there is little left outside of apples and a few pears. In the former, the cull stock is rapidly disappearing and as the No. 1 stock is coming on the stands the price is standard thruout the markets.

Eggs.—78@80c per dozen.

Butter.—Country, 65@70c lb.; separator, 70@75c lb.; milk, 12c qt.

Poultry.—Hens, 22@24c lb.; dressed, 75c @$2 each.

Vegetables. — Potatoes, 15@25c ½ pk.; $1.25@1.50 per bu.; lettuce, 5@10c hd.; cabbage, 3@8c hd.; beets, 5c bx.; radishes, 5c bch.; onions, 4@5c bch.; 15@25c ½ pk.; lima beans, 20@25c qt.; soup beans, 15@20c qt.; celery, 3@10c stalk; turnips, 10@12c ½ pk.; spinach, 10c ½ pk.; apples butter, 45@50c qt.; lard, 35c lb.; sausage, 35 @36c lb.; pudding, 30c lb.; steak, 35@45c lb.

Fruit.—Apples, 30@60c ½ pk.; $2@3 bu.; pears, 10c bx.; 15c ½ pk.

Retail Grain Market.—Wheat, $2.40; corn, $2; oats, $1; rye, $1.70; bran, $3 cwt.; middlings, $3.50 cwt.

Wholesale Grain Market.—Wheat, $2.20; corn, $1.60; oats, 80c; rye, $1.40; bran, $47 ton; middlings, $68 ton.

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NEW YORK PRODUCE

New York, Dec. 1, 1919.

Butter firm; receipts, 7582 tubs; creamery, higher than extras, 74@74½c; extra (92 score), 73½c; firsts, 62½@72c; packing stock current make No. 2, 50@50½c.

Eggs firm; receipts, 10,431 cases; fresh-gathered extras, 83@84c; do., extra firsts, 80@82c; do., firsts, 76@79c; state, Pennsylvania and nearby western hennery white, fine to fancy, $1@1.02; state, Pennsylvania and nearby hennery white, ordinary to prime 75@98c; do., brown, 88@92c; do., gathered brown and mixed colors, 83@84c.

Cheese easy; receipts, 1991 boxes; state, whole-milk flats, current make specials, 32½ @33c; do., average run, 31¾@32c; state, whole-milk twins, current make, specials, 31½@32c; do., average run, 31c.

Vegetables.—Potatoes, Long Island, $5.50 @$6 per 165-lb. bag; Jersey No. 1, $4@4.75 bag. Beans, green, $1@4 basket; do., lima, $3@4.50 basket. Beets, $2@2.50 per barrel. Carrots, $2@3.50 per bbl. Cabbage, $4@10 per 100. Lettuce, $1@3 basket.

Fruit.—Apples, McIntosh, $5@10; Baldwin, $4@8; Northern Spy, $4@9; York Imperial, $4@8.

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PITTSBURGH PRODUCE

Pittsburgh, Pa., Dec. 1, 1919.

Butter.—Creamery, 78c; tub, 76c; cooking, 60@61c.

Cheese.—New York full cream, 35@36c. Ohio, 34@34½c. Wisconsin, Swiss, 54@55c. Philadelphia cream, $1.60 per dozen.

Eggs.—Fresh select, 78@80c; Candled storage 57@58c. Storage, 52@53c.

Potatoes.—Round, $4@4.50 per 150 lb. sack. Onions, $5.50@6 sack. Cabbage, $3.50@4 bbl. Lettuce, New York, $2.50@3.25 box. Sweet potatoes, $5@5.25 barrel. Cauliflower, $3@3.25 bushel. Turnips, $1.75 @2 bu. Celery, 50@90c dozen. Beans, wax and green, $3@3.25 bushel. Squash, $1.25 @1.75 bbl. Beets, new, 20@30c doz.

Fruit.—Apples, $2@3 bushel. Quinces, $2.25@2.75 bushel. Chestnuts, 15c pound.

PHILADELPHIA LIVE STOCK

Philadelphia, Pa., Dec. 1, 1919.

Receipts of live stock for week ending November 29, were as follows:

	Beef Cattle	Sheep and Lambs	Hogs
Total for Week	...2,414	7,493	11,320
Previous Week	...2,180	8,545	9,693

Calves.—Receipts of calves last week were 978 head against 1,383 head week previous.

Beef Cattle generally firm, with choice stock a shade higher. Steers, good to choice $16@17.50; do., fair to good, $14@16; common to fair, $12.50@14; cows,fat, per pound, good to choice corn fed, 10@11½c; fair to good 7½@9½c; do., common to fair, 4½@7½c; calves extra choice, $20.50 @21; fair to good, $18@20; common, $12 50 @16.50; heavy, $8.50@12.50; Tennessee, choice, $16@17.50; other southern, $9@13.

Sheep and Lambs.—Sheep easier, but choice stock pretty well cleaned up at revised figures. Fine lambs firmer. Sheared sheep, wethers, extra, $10@10.50; good to choice, $8.50@9.50; medium, $7@8; common, $3.50@5; ewes, fat, heavy, $7.50@8; spring lambs, choice, $15.50@15.75; medium, $12.50@14; culls and common, $10@11.50.

Hogs.—Plentiful and easier. Demand fair Quotations for best western, $16.50@17; nearby, good, $14.25@14.50.

City Dressed Stock.—Quiet as usual during Thanksgiving week, when trade attention is diverted to a considerable extent to dressed poultry. Prices showed little change and offerings moderate but ample. Steers, 20@26c; heifers, 15@20c; cows, 13@18c; calves, city dressed, choice, 24@26c, country dressed, 20@24c; sheep, 12@18c; lambs, spring, 24@27c; hogs, 21½c.

LIVESTOCK

East Buffalo, N. Y., Nov. 29.—Cattle—Receipts, 1230; slow. Calves—Receipts, 300; steady, $5@22. Hogs—Receipts 3200; steady to 15c higher; heavy and mixed, $13.85@14; yorkers, light, do., and pigs, $13.85; roughs, $12.50; stags, $8@11. Sheep and Lambs—Receipts, 3800; lambs strong; lambs, $8@15.50; others unchanged.

Chicago, Nov. 29.—Hogs.—Receipts, 9000; active; bulk, $13.60@13.85; top, $13.95; heavy, $13.50@13.95; medium, $13.60@13.90; light, $13.50@13.85; light light, $13 @13.65; heavy packing sows, smooth, $12.75@13.25; heavy packing sows rough, $12.25@12.75; pigs, $12.50@13.25. Cattle.—Receipts, 5000; compared with a week ago; Fat steers, 50c@$1 higher; she stock, 45@50c higher; best feeders, 25c higher; others steady; western, 25@50c higher; calves steady. Sheep.—Receipts, 2000; compared with a week ago; Fat lambs, 50c@$1 higher in-between grades advancing most; fat sheep, yearlings and feeding lambs mostly 25@50c higher; feeders and breeding sheep steady. Unofficial estimates of arrivals Monday; Hogs, 50,000; cattle, 33,000; sheep, 27,000, and for next week, hogs, 250,000.

Pittsburgh, Nov. 29.—Cattle steady; supply light; prime, $15@15.25. Sheep steady, supply light; prime wethers, $9.50@10.25; culls and common, $3@4.50; lambs, $10@15. Veal Calves, $18@19. Hogs steady; supply light; prime heavies, $14; mediums and heavy yorkers, $14.15@14.25; light yorkers, $13@13.50; pigs, $12.75@13; roughs, $10@12.25.

Lancaster, Dec. 1. — Cattle.—Receipts, 4655, against 6127 last Monday; market active, prices 25c higher on best grades, yards clear at close of trading; good to choice steers, $13.75@15.75; fair to good steers,$13 @13.50; medium to fair steers, $12@12.75; common to medium steers, $9.75@10.75; smooth and fat bulls, $10.15@11.15; medium to good bulls, $9@10; common to medium bulls, $7.25@8.25; smooth and prime heifers, $12.50@13.50; coomon to medium heifers, $8.25@11; good choice cows, $8.75 @10.25; fair to good cows, $7@8.50; common to medium cows, $4.50@5.50; stock bulls, $7.50@8.50; good to prime calves, $19.50@20.50; medium to good calves, $17 @18.50; common to medium calves, $13.50 @14.50; best grade feeder steers, $12.25@13.50; lower grado feeders, $8.50@11; oxen, best grades, $10@12.50; common grades, $6.50@9; best grade stock bulls, $9@10; common grades, $7.55@9; best grade stock heifers, $9@10; common grade, $7.50@9. Hogs.—Receipts, 881; market active; prices steady; good to prime, $15@15.50; light to medium $13.75@15.50; roughs, $12.50@13; stags to sows, $10@12.

PHILADELPHIA HAY AND GRAIN

Baled Hay and Straw.—Receipts, 300 tons of hay and 2 cars of straw. Well cleaned up and firm. Timothy hay, No. 1, $33@34; do., No. 2, $30@31; do., No. 3, $27@28; clover mixed hay, light mixed, $30@31; No. 1 mixed, $27@28. Straw.—No. 1 straight rye, $15@15.50; do., No. 2, $14@14.50; do., No. 1 tangled rye, $14; do., No. 2, $12.50 @13; do., No. 1 wheat straw, $14@14.50; do., No. 2, $12.50@13; do., No. 1 oat straw, $14.50@15; do., No. 2, $12.50@13.

Bran quiet but steady. Car lots to arrive, including sacks; Soft winter bran western, in 100-lb. sacks, per ton, $45.50@46; spring bran, in 100-lb. sacks, per ton, $44@45.

Corn.—No. 2, yellow, $1.70@1.72.

Oats.—No. 2, white, 84@84½c; No. 3, 83@83½c.

NEW YORK HAY AND GRAIN

New York City, Dec. 1, 1919.

Feed.—The market for mill feed was very inactive, and while price changes were more or less irregular the undertone was easy. There appeared to be less pressure to sell bran than the other products, while red dog flour was weak, with offers large and the demand very slow.

Quotations: City feed bran, $45; middlings, $54, in 100-pound sacks; red dog, $69 nominal in 100-pound sacks; Western spring bran, $44;standard middling, $47@48; flour middlings, $56; red dog, $62, all in 100-pound sacks, 30-day shipment. Oat feed, $28.50; rye middlings, $48; white hominy feed, nominal, all in 100-pound sacks. Cottonseed oil meal $80.50; linseed oil meal, $80, in 100-pound sacks.

Hay and Straw.—Trade is quiet to-day at all harbor points and market is no more than steady at generally unchanged prices, $36 being extreme top for the best Timothy hay arriving. New invoices are still light, tho with the lifting of the New York Central embargo last Wednesday morning they should soon show some increase. Rye straw very quiet. Oat straw steady.

Hay.—No. 1 large bales, $35@36 ton. No. 2, $33@34 ton; No. 3, $30@31; shipping, $27@29 ton. Fancy light clover mixed, $33 ton. Clover, No. 1, mixed, $31.

Straw.—Per ton, No. 1 rye, $14; No. 1, oat, $15.

Wheat.—No. 2 red, $2.37½.

Corn.—No. 2 yellow, $1.70¼; No. 3, yellow, $1.61.

Oats.—No. 2 white, 84½c; No. 3 white, 84c.

Rye.—Export, $1.62¼.

Buckwheat.—Milling, $3 per 100-pounds.

PITTSBURGH HAY AND GRAIN

Pittsburgh, Pa., Dec. 1, 1919.

Hay.—No. 1 timothy, $30@30.50; No. 2, $28@29; No. 3, $25@26; No. 1 light mixed, $28@29, No. 1 clover mixed, $30@31. New No. 2 clover mixed, $25@28.

Straw.—Receipts are beginning to run extremely light while the demand is getting better but not urgent. Market looking higher.

No. 1 oat, $13.50@14; No. 2, $13@13.50; No. 1 wheat, $13@13.50; No. 1 rye, $14@14.50.

Ear Corn.—Receipts and demand are both light, not much trading, buyers anticipating lower market. New No. 2 ear corn offered at $1.36 per bushel.

Oats.—Demand better for oats with light receipts. Trading good. No. 1 white, 83@83½c; No. 2, 82½@83c; No. 3, white 81@82c.

CHICAGO GRAIN

Chicago, Dec. 1.—Increased anxiety regarding coal shortage did a good deal today to give an upward swing to the corn market. The close was unsettled at 1¼ to 3⅛c net higher, with December, $1.38¼ to $1.38⅜ and May, $1.32¾ to $1.32⅞. Oats gained ⅞c to 1⅛c. In provisions the finish varied from 17c decline to a rise of 22c.

Corn trades showed an evident disposition to anticipate that as a result of coal strike development the movement of corn to primary centers would be more restricted than has heretofore been deemed probable. The fact that there was no corn delivered here today on December contracts acted to focus attention on the smallness of the stock of corn in Chicago, and so, too, did the comparative scantiness of receipts and offerings Besides hog values were sharply higher and weather conditions unfavorable. In the last hour, though, the advance of corn was somewhat checked by announcement that one of the chief industrial buyers of corn had withdrawn from the market.

PHILADELPHIA DAIRY MARKET

Philadelphia, Pa., Dec. 1, 1919.

Butter.—Receipts, 4559 tubs. There was no important change in the market. The Produce Exchange was closed, and there was little trading on the street. Supplies of all descriptions were ample for current needs. We quote today as follows: Fresh solid-packed creamery, fancy, high-scoring goods, 74@76c; the latter for jobbing sales; extra. 73c; extra firsts, 67@70c; firsts, 60@63c; seconds, 57@59c; thirds, 55@56c; sweet creamery, choice and fancy, 75@77c; do. fair to good, 64@72c; ladle-packed, as to quality, 50@52c; packing stock, 47@49c; fancy brands of nearby prints jobbing at 80@82c; good to choice, 69@79c; fair, 65 @67c.

Cheese quiet but steady. We make the following quotations: New York, whole-milk flats, fancy 33¼@33½c; fair to good,32½ @33c. Wisconsin, whole-milk flats, fancy, 33@33¼c; fair to good, 32@32½c; jobbing sales of fancy goods, 35@36c.

◆

THE MILK MARKET

New York City, Dec. 1, 1919.

Distributers reported a fairly active demand last week and arrivals well cleaned up. The December rate in 200-mile zone for 3 percent milk is $3.68 per 100 lbs.; 3.06 percent milk is $3.92; and 4 percent milk is $4.08.

Receipts of milk and cream in 40 quart can for the week ending November 29, 1919, were as follows:

	Milk	Cream
Erie	44,214	3,554
Susquehanna	7,068	98
West Shore	11,110	1,372
Lackawanna	56,144	1,510
New York Central ..... (long haul)	123,986	1,976
Ontario	44,972	2,004
Lehigh Valley	45,126	716
New Haven	5,114	40
Pennsylvania	11,418	416
Other Sources	6,300	180
Totals.......	355,452	11,866
Same week last year...	335,806	10,024

CLOVERSEED

Toledo, O., Dec. 1.—Cloverseed.—Prime. cash, $30.80; December, $30.65; January, $30.40; February, $30.65; March, $30.40. Alsike.—Prime, cash, $31.10; December, $31.10; March $30.85. Timothy.—Prime, cash, 1917, $5.45; cash, 1918, $5.45; cash, 1919, $5.67½; December, $5.67½; March, $5.87½; April, $5.87½; May, $5.87½.

TOBACCO MARKET

Tobacco market transactions seldom have been more activo than at present, now amounting to considerably more than one-half of the crop, it is estimated. Starting at about $18 per cwt. for wrappers, as compared with $15 last year some have sold as high as $25, and others are holding for $30. Last year, fillers sold as low as $3 per cwt., while at this time such tobacco is wanted at $6 to $9. Sales are reported from all sides and with a continuation of present activities 90 percent of the crop will be contracted by the end of the year. following are prices at which crop lots were sold: 7 acres at $25 and 10; 8 at $22 and 8; 9 at $22 and 9 per cwt. At another point 6 acres at $20 and 6; 4 at $17.50 and 6 per cwt. And at another, 8 acres at $18 and 6; 10 acres at the same price, etc. Most of the sales were within the range of above figures. It is noted that many speculators have entered the field, thus showing their belief in future advances in which opinion they seem to be fully justified. Most of the members of the growers' association will refuse all offers and again pack their tobacco as they were practically compelled to do with last year's crop. It can no longer be denied that the present crop is of very desirable quality and that every pound of it will be wanted before another is ready for market. Doubtless, the many big additions to bank accounts which will come from this year's effort, together with the somewhat easier outlook with reference to the future value of other farm products, will create an effort to grow an increased acreage of broad leaf tobacco during the season of 1920.

THE GIRLS ANSWER

(Continued from page 23.)

where there is no rest for anyone. The birds, and the bees and fields, mountains, meadows and babbling brooks have been my sweetest associations all my life, but I can't do the work on the farm. It is too hard. On our farm there is my mother, two grown sisters (one a teacher) and myself. We have to work hard continually. We never seem to get caught up till the season changes again. We girls get a holiday or visit by taking it, but mother is more conscientious and does not take the time off, or she would have to double her speed to catch up, so she says.

We farm girls—a great many of us—would be perfectly willing to live on the farm but coming to fine points, our country boys do not dress as "classy" or make such a fine showing of culture as they should. It almost disgusts me to see our country boys appearing in ill-fitting unfashionable clothes, when they could be just as fashionable as the "City Chap" any time while clothes do not make the man, one's personal appearance goes a long way toward his success in this would, in this Twentieth Century. There is where the city boy comes in ahead and carries us country girls away to their city homes with all the conveniences, where there are neither cows to milk nor churning to do nor calves and hogs to feed. All those hard jobs take strength and add much to the drudgery.

We girls look ahead too. We don't feel that we can raise a family in the best possible way and do so much hard work.

The children, in a great many cases, are poorly cared for on the farm as the mother hasn't the time and strength to raise a family and calves at the same time. If we were assured by that chivalrous youngman, who seeks our heart and hand, that we would have a farm home with modern conveniences, only house work to do, and a vacation a few times in our lives, then. I as well as many other girls of my acquaintance would marry farmers. E. McM., Huntingdon Co., Pa.

Make Money First

Being much interested in the recent letters published in your paper from "Bachelor" and the girls, I beg to be allowed to get into the argument as a second Bachelor. If "Bachelor" will get the farm and all of the nice things he speaks of and guarantee his bride enough help to keep her hours down to 8 or less, as she can do in the city, I feel sure he won't have any trouble getting one. But experience proves it easier to earn this in the city and spend it in the country. So, first, he must go to the city and get rich enough to join the vast army of farmers who are farming with money and not for money, thus cutting the price for those who are farming for money with its consequent drudgery of which the girls speak and seek to avoid which I think is both their privilege and duty. In regard to future farmers I have no fear at all. If enough persistant farmers like myself and "Bachelor" will die old Bachelors, farmers of the next generation will be scarce enough so that what they can produce in an 8-hour day will keep them as comfortable as in the city.

To my mind it is a crime to coax the young to stay on the farm in view of its many draw-backs. First, the child is robbed of experience, money, amusement and, in many cases, social privileges. Second, the farmer with cheap child-labor is able to produce and sell at less than actual cost, so the city man and dealers get what really belongs to the boys and girls who are seeking to get out from under the load but don't know why. This results in general overproduction. We have cases where two or three daughters have left home and earned in a very short time more money than father, mother and brothers have earned in all their lives making father's income look like 30 cents after a hard day at Coney Island. Therefore, in summary, we may at least shutup and each one who leaves makes life better for the remainder.—Practical.

Some Reasons Why

I was very much interested in the letter written by the "Bachelor" from Westmoreland Co., Pa., and would like to give him my view of the matter. As is the case in his community, so it is in ours: the city gets most of our young people both boys and girls. Why do they go? In the first place woman holds a different place in the world today from what she did in his mother's and grandmother's day. Then, the only thing for a girl to do was to marry or become dependent upon some of her relatives for a home where in many instances her presence was not desired. Now, girls may do hundreds of kinds of work whereby they may become independent and marry or not as they please.

I do not wish to place any discount on marriage nor the farm. I love country life too, much better than city life, but I like to have a feeling of independence and to know that I can make my own living. So it is with most young people of today. There seem to be greater opportunities in the city than in the country for people to make money.

Still, I think that if "Bachelor" painted country life to some sweet pretty girl as he has painted it in his letter, and pleaded his case strongly enough he might induce her to stay in the country, or perhaps return to the country from the city. I am sure his home must be an ideal one if it contains conveniences he mentions. It is the exception rather than the rule here. Country people are waking up, it is true, but it will be a long time yet before those things are found in all country homes.

He also says its is not lonely on the farm. No, I don't think it is, as a rule, if you know how to occupy your spare time to amuse yourself. Music, books and magazines, fancy work and such thing help greatly to entertain when the day's work is over. We go to the movies about once a week, a distance of ten miles. But in bad weather when the roads are impassable, I must say that the evenings seem rather long sometimes. I think if I had to depend entirely upon kittens, cows and chickens for "amusement by the hour" I should head for the city right away—for a visit at least.

I think when the country people awake to the fact that country life must be made attractive to young people we will not see them rushing to the cities for excitement and adventure.—Maryland Girl.

Penn. State Judging Teams Receiving Instructions from Prof. Borland for Work at Eastern Exposition.

Few Conveniences

I must say that I like the farm, but we have no such convenience as he mentioned in his letter. If we had I should like it better. I have lived on a farm nearly all my life and am 17 years of age but I have never had much pleasure of any kind, We have to walk nearly two and a half miles to school and three miles to church when we go, but it is very seldom that I go. I have never worked in the field's very much. We wash and iron the old fashioned way, and have to carry our water a little distance from the house. We have none of the improved farm machinery. I have to use a coal oil lamp when I want a light. I agree with the girls who wrote in answer to his letter, last week. I have never had any money of my own, and get but very few clothes. I do not blame the girls much for leaving the farm. Sometimes I think I will, but I will stay and help my mother a while yet as she is as tired of the way we have it as I am.—L. C. of Bedford Co., Pa.

A City-Country Girl

I am a country girl, in fact a Pennsylvania farmer's daughter, who has gone to the city—for economic reasons. After finishing high school I would have been glad to have gone to college, but could not; therefore, two things were open to me, either to be a country school teacher or take a business course and go to the city. All my friends were fitting themselves for teachers. I wanted to be different, so I chose the business course.

I am now with a firm anyone might be proud to be connected with and doing as well as the average girl.

As the "girls" discussed the economic side of the problem in the November 8th issue. I will try to tell the "Bachelor" the differences between the city fellow and the country man as I see them for the thing he really wants to know is why the girls perfer to marry the city fellow instead of going back home and marrying their country beaus.

Girls require the same moral standards of their gentlemen friends in either place.

The country men who are my particular friends are financially better off than my city friends, yet they always seem to forget the little nicities that the city men do as a matter of course. For instance, a city man never forgets to send "his girl" flowers on special occasions, or the usual box of candy and magazines. How many girls have you remembered with books, flowers or candy during the past year? Don't mistake me—no sensible girl will accept expensive gifts from a young man, but she does like little remembrances.

Then there are the little personal things that count. Too many country fellows do not see the necessity of well pressed suits, manicured nails, good English, and proper carriage. These things are natural to the city men, probably from his occupation. No girl likes to be made conspicious by the man she is with, which is often the case when agirl goes out with a country man .

As for the girls, there are a few raised on farms who perfer the excitement of a cheap vaudeville show, movie or public dance to a quiet farm life, but the majority of country girls in the city the ones who enjoy good music properly chaperoned dances, parties and shows or the ones who remain at home to knit or read even if it is a hall bedroom—dream of a country home in preference to a city flat with a dusty street in front if only they could find the country men, who measure up to their ideals.—A Country Girl in the City.

His Sentiment Exactly

I read the article by the Westmoreland County Bachelor and find that his views are very much in sympathy with my own and I think a lot of other young and middle age bachelors.

It is a fact that the average farm raised girl wants to move to town or at least to marry a few hundred per cent. above her self socially. She is just a little too proud to hook up with one of us plain ordinary farmers who have our way to make in the world. I have kept company with three or four of them and found them much the same. They were all more or less disgusted with the cows and chickens, and ready to move to town.

I, for one, like the country life best. I have tried them both and ought to know. About five years of my young life was spent in the city. I had a fine position and made what was considered a fair salary, and altho I never considered myself reckless with money, it dwindled just the same. Again, my health was not nearly as good as in the country.

However, I believe in country folks having as many conveniences as they can afford.

About the only girls I have met who seemed anxious to try the farm were city girls and the reason they were anxious was because they knew nothing of the practical side of farm life.

Perhaps a few months of city life would cure some of our all-too-modest country girls.—Another Bachelor, Allegheny Co., Penna.

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Iowa Agricultural College, Ames, Iowa, fed two groups of hogs, same number, same litter—record per 100 lbs. gain in weight.

	Days	Corn	Meat Meal	Wheat Middlings	Weight
No. 1	216	442 lbs.	33 lbs.	31 lbs.	296 lbs.
No. 2	156	148 lbs.	9 lbs.	14 lbs.	299 lbs.
Gain or Saving	62	294 lbs.	24 lbs.	17 lbs.	3 lbs.

No. 1 had no butter milk. No. 2 had all they would drink. You can do as well or better.

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Holstein Heifer Calves By pure bred sire and high-grade big producing cows. Beautifully marked. Splendid individuals, $20 up. Browncroft Farms, McGraw, N. Y.

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Milking Shorthorns Bull Calves sired by Glenside Royal Stamp for sale. C. M. KENNEDY & SONS, Ulster, Bradford Co., Pa.

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FOR SALE: 3 CHOICE REG. GUERNSEY BULL Calves, 6 months old, May Rose breeding. Dams now on test. $75 each. Riverview Farms, Swarthmore, Pa.

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Woodcrest Winters Pietje Boy No. 199649, born Oct. 25, 1918. Sire—Pietje 22d Son. Dam—Lady Winters DeKil 2d, a 25.33 lb. four-year-old. Record 365 days, 848.08 lbs. butter; 18,561 lbs. milk. Write for price and pedigree.
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SIMON GRUB'S DREAM

The text was this: "Inasmuch as ye
  Have done it to these ye have done it to me."
Soon Simon slept, for 'twas sultry weather,
  And the dream and the sermon went on together.

He dreamed that he died and stood at the gate
  Of the outer court where the angles wait
For those who hear the glad "well done"
  And can enter the realms of the Holy One.

While Simon waited and wondered if he
  Had forgotten the password, or lost the key,
A voice above him said, loud and clear,
  "Do you know you must bring your witnesses here?"

"Of witnesses there are many," said he;
  "My brethren and neighbors will all speak for me."
But the brethren and neighbors came not near,
  And he heard only a whinny, familiar and clear;

And old Grayfoot, the horse, stood just at his right,
  While around on the other side, just coming in sight
Was a crowd of dumb creatures so forlorn and so poor
  That the angel wept as he opened the door.

Then Simon grew pale, and trembling with fear
  Said "O why are not some of the brethren here?
Pray wait, pray wait, they'll surely come."
  'Twas Grayfoot that spoke then, and Simon was dumb.

"On wintry nights I've stood in my stall
  When the cold winds blew thru the cracks in the wall
Till every joint and sinew and bone
  Seemed frozen and dead as the coldest stone.

"I've shivered the dreary time away
  With only some wisps of the poorest hay;
Then put to work with shout and blow,
  So hungry and faint I could scarcely go."

Then old Brindle came and, with soft brown eyes,
  Fixed on her master in sad surprise,
Told a pitiful tale of starvation and cold,
  And how he had sold her food for gold.

The poor sheep told their story too
  Of bitter wrongs their whole life thru;
Turned out in cold and stormy weather,
  To starve and freeze and cry together.

They were lowly cries, but they turned to prayer,
  And floating upward had rested there
Close by the ear of him who says,
  "I will hear the cries of my poor always."

The old house dog, tho treated ill
  Came near and fawned on his master still,
Because the love these dumb things know
  Is more human, more faithful, more true.

Then conscience woke, like some torpid thing
  That is brought to life by the sun in spring.
And it lashed and stung him like poisoned thongs
  As memory brought him his train of wrongs,
Forgetting nothing of word or deed,
  Of cruel blows or selfish greed.

His cruelly-treated friends that were dumb—
  Would they follow him on thru the ages to come,
Must he see them forever gaunt, hungry, and cold?
  For "Time and eternity never grow old."

How oft in dumb pleading they'd asked a caress,
  From his hands that had beaten and starved them! Ah yes,
He remembered it all, and it stung him to know
  That the love they had craved had been met only with blow.

'Twas in vain that he strove to speak to say
  Those sweet old words "Forgive, I pray;"
Sin's last sad cry; he was silent there;
  He was dumb, with such woeful need of prayer.

Then voices seemed floating on every breeze:
  "Ye did it to these, Ye did it to these.
Go hence, be homeless, go starve and freeze;
  Ye did it to these, Ye did it to these.

"And when you are faint and weary with woe
  You will still hear the shout, you will still feel the blow,
While a voice from which you shall never be free
  Will whisper beside you, 'Ye did it to me.'"

But hark! What melody over him rolls?
  Do the angels sing requiems over lost souls?
His last hope had fled. In an agony new
  He awoke—to find himself safe in his pew.

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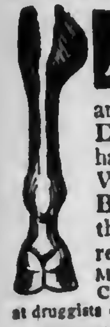

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Veterinary

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Advice thru this department is free to our subscribers. Each communication should state history and symptoms of the case in full; also the name and address of writer. Initials only will be published. We cannot make reply by mail. This is one of the most valuable columns of the paper and we invite readers to make use of it. Clippings from this column, when properly preserved and classified, make one of the most valuable medical symposiums a farmer-stockman can obtain.

Hernia. (Rupture).—I have a Jersey calf 8 months old which I value very highly. She is ruptured at the navel, how long since it happened, I am unable to state, but it must have occurred some time ago. The navel has been enlarged for some time, but today it is much larger than formerly. What can be done for her? K. F. B., Felton, Pa.—I know of no better plan than to call a competent veterinarian who has successfully operated on similar cases, and I might say there is no other remedy for this ailment. Of course if you didn't care to go to the expense of having her treated she could be fatted and sold for beef. The operation is not very difficult, besides it is usually successful.

Congestion of Lungs.—Have lost 4 young pigs this fall, the first one to die was a week old, the others were a few weeks old and were sick only a few days. A. H. C., Newville, Pa. Your pigs either die as the result of congestion of lungs, terminating in pneumonia, or the result of food poison. Keep them in dry, warm place and feed them good quality of food.

Weak Tendon.—For the past six weeks our 5-year-old horse has been traveling some lame in left fore leg. The only difference between the two fore legs is a swelling of the cord below knee and when pinched he flinches. If it is necessary to give him rest I can do it as I can borrow a horse to take his place.—H. J. K., Echo, Pa. Doubtlese your horse suffers from sprained back tendon, it is good practice to give rest, then nature steps in to repair the weak parts. Clip off hair and apply one part powdered cantharides and five parts fresh lard every two weeks. After applying this blistering ointment, tie his head up short enough so that he is unable to bite the blistered leg. At the end of 36 hours he can be safely unhitched and allowed to lie down. One week later, apply petrolatum daily to soften the skin in order to prepare the parts for a second blister. One blister might be all that is needed to stimulate a healthy action and make him go sound. Remember the tendon will always remain slightly thickened, as it is almost impossible to reduce it to normal size.

Dead Pigs.—Early last Spring my two sows raised large litters of pigs, the pigs thrived well up to weaning time. The sows were thin but seemingly healthy. I bred them again. Now, this fall their letters are small and several of their pigs have died. What do you believe to be the cause? —F. R., Welsh Hill, Pa. Doubtless your sows' vitality were somewhat reduced while raising the large litters. Perhaps they should have heen fed up before they were again bred. Their having smaller litters indicates weakness; therefore, I believe it must have been a mistake to have bred the sows early.

Wounded Leg.—I have a young mare that kicked thru a stall about 6 months ago and tore the flesh off the bone between the hock and fetlock joint. Some 5 inches of the shin bone was scraped. Our local vet. gave me white powder to apply, but a large bunch of proud-flesh filled wound, which he cut off with a chain, then he told me to apply iodin. Have burned off bunch with caustic soda, but bunch persists in growing. I wish you would tell me how to heal the sore?—C. H. N., Mercersburg, Pa. In my practice I usually remove surplus fungus tissue with a sharp knife, then paint wound with the following mixture 3 times a day: Dissolve one ounce permanganate of potash in ½ pt. of water, shake and apply with brush. Don't wash wound. If it suppurates, apply peroxide of hydrogan, when necessary, to remove pus. In conclusion, let me say these kind of cases are unsatisfactory to treat, no matter who tackles them.

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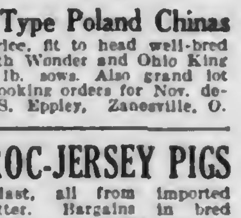

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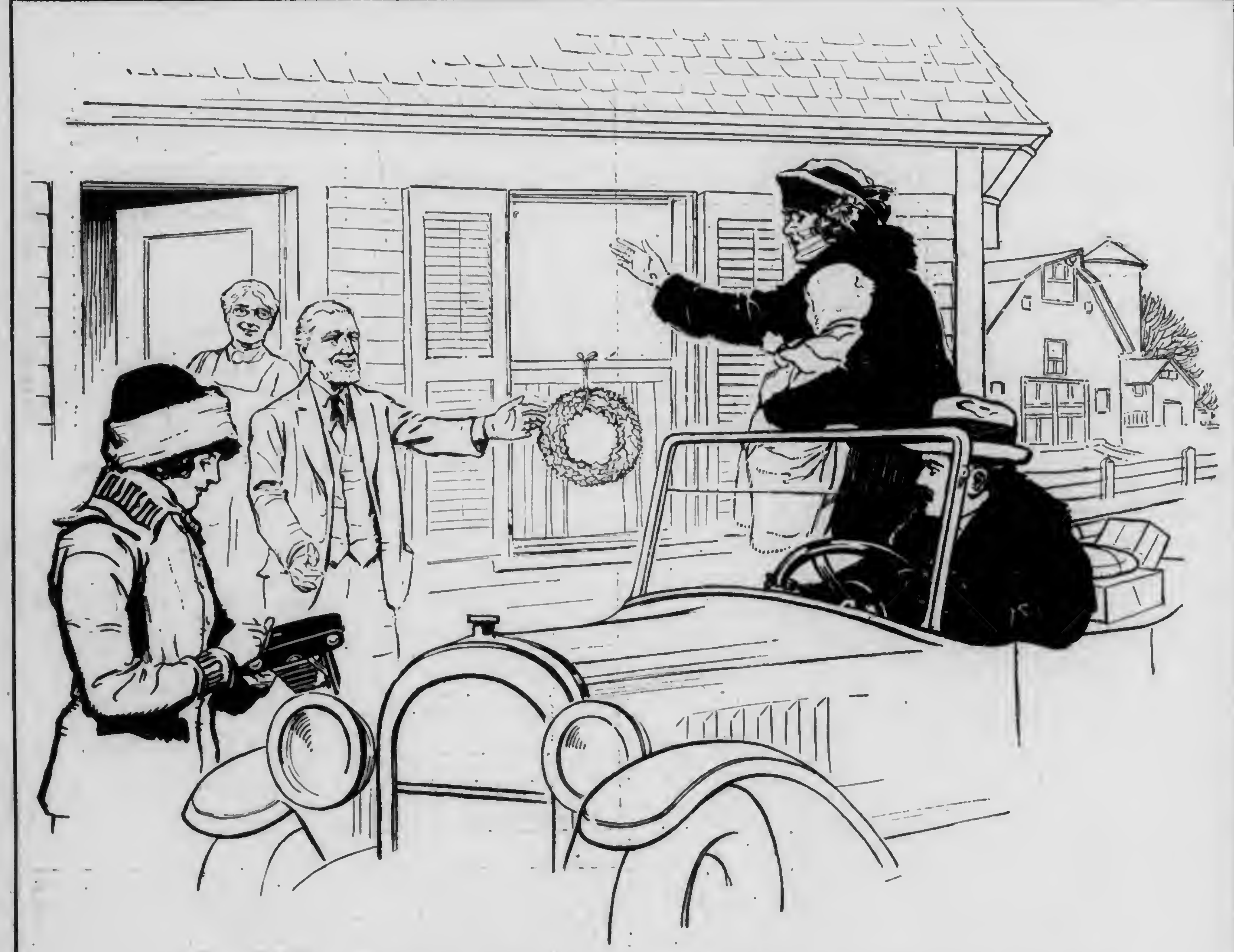

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PENNSYLVANIA FARMER

AGRICULTURE
THE KEYSTONE OF
NATIONAL PROSPERITY

ESTABLISHED 1880

PUBLISHED WEEKLY

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Volume 46 PHILADELPHIA, PA., SATURDAY, DECEMBER 13, 1919 Number 24

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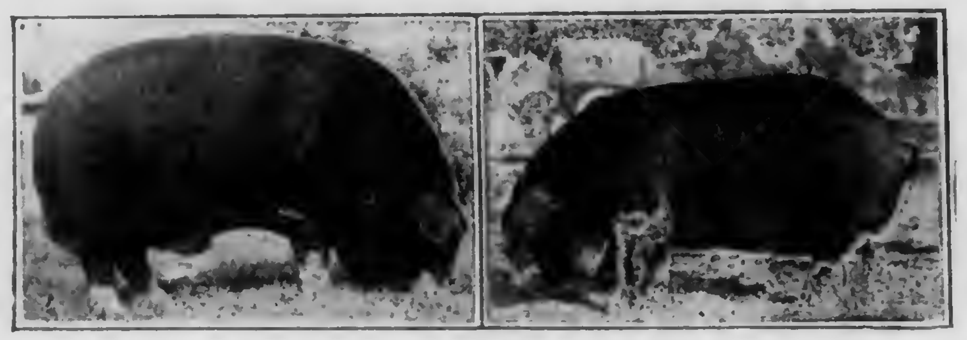
AGRICULTURE THE KEYSTONE OF NATIONAL PROSPERITY
ESTABLISHED 1880 PUBLISHED WEEKLY

The Lawrence Publishing Company
Philadelphia

Vol. 46—No. 24. PHILADELPHIA, PA., SATURDAY, DECEMBER 13, 1919. 75 Cents per Year

PROFITABLE PIG FEEDING

Best Materials to Use With Home-Grown Products---Prof. F. C. Minkler, N. J. Exp. Station



The farmer who is interested in pork production is always anxious to feed his animals in the most economical way, and should not be satisfied unless the pigs evidence a normal development of bone and muscle, nor unless their gains are persistent and rapid. It is the habit of many stockmen to rely upon the pigs on the farm to consume the refuse material and such farm products as are not marketable by reason of immaturity or some damaged condition; and oftentimes they do not give sufficient thought to the problem that perhaps pigs would respond more rapidly if greater care were exercised in supplying supplementary feed which would increase the feeding value of even the waste products.

All growing and fattening animals require chiefly two substances: one to supply the necessary heat and energy, and the other to produce blood, bone and muscle. We might liken the development of an animal's frame to the construction of a brick house. Naturally the mason requires brick and mortar. If he has an abundance of material he can proceed with the construction without interruption. If he is unfortunate enough to lack mortar he must of necessity cease all work, for loose brick will not stand alone. On the other hand, if he has an abundance of mortar or cement yet no bricks he can continue his building operations by putting up forms and filling with more expensive material. Naturally the structure would cost more but in any event the building can be completed.

As applied to feeding live stock the carbohydrates, or heat and energy producing feeds, may be likened to the bricks, and the products that supply blood and muscle may be likened to the mortar. A pig would starve to death on carbohydrates alone, yet if it is supplied with an abundance of protein it is possible for it to obtain heat and energy as well as blood and muscle making materials from the protein. However, it marks time and of course the process is very expensive and the gains, under such conditions, would not be economical.

The man who feeds pigs knows very well that corn is clearly the most economical source of carbohydrates for pigs. Likewise he knows that a variety of heat and energy producing materials are advantageous, and naturally prefers to use some barley and oats in combination with the corn products. When it comes to sources of protein it requires more argument to convince him that it is necessary for him to secure some of the so-called high priced materials. Owing to the fact that corn contains a small amount of protein he finds that the pigs can live exclusively on this material. Hence he concludes that much of the argument about protein carrying feeds is scarcely worthy of consideration, and usually he goes along in his own way. This condition has been supported by the fact that concentrated materials rich in protein, such as tankage and blood meal, have increased materially in price, and the farmer feels that he is not justified in paying over $100 a ton for such materials.

If one is careful enough to investigate the results of experiments that have been conducted he will realize fully the importance of using a limited amount of some concentrate rich in protein, and carrying an abundance of ash and mineral matter.

Tankage is a by-product of slaughter-houses. Where cattle, sheep, or swine are slaughtered all of the blood is assembled, piped into so-called digesters, the moisture evaporated, the residue run thro dryers, after which it is ground preparatory to being mixed with meat scraps and ground bone that are assembled from various operations in the packing plant. Usually about fifty per cent. of commercial tankage or meat consists of blood meal, and is distributed by the packers thro the agency of feed dealers and sold for feeding swine. The better grades of tankage carry at least 60% of protein. Of course there are low grades of tankage that contain generous amounts of hair, ground bone, and other refuse materials that are not digestible, and that are most deceptive to innocent buyers. Blood meal, on the other hand, contains as much as 90% of protein, and is valued commercially to supplement skimmed milk used in the feeding of calves and poultry.

Doing Their Own Husking, Shelling and Grinding

There are a number of sources of protein that supply this material economically for feeding swine. Among them might be mentioned digester tankage, meat meal, skimmed milk, alfalfa or clover hay, soy bean meal, and oil meal. Naturally tankage and meat meal come first because, in addition to supplying protein and certain other constituents in economical form, they stimulate the appetite to such an extent that it is believed that digestion is more complete and efficient when they constitute a portion of the ration, particularly for feeding growing or market hogs.

For mature breeding animals the alfalfa and clover hay, skimmed milk, and the other products mentioned will serve quite as well since such animals are not maintained on full feed. Hogs being fattened for the market require concentrated feed, and alfalfa and clover hay are rather bulky for such use.

It is interesting to study the following tabulation of the protein carriers mentioned, giving as it does the comparativce amounts of the digestible protein, as well as the total digestable nutrients in 100 pounds of the various feeds.

Feed	Digestible protein in 100 pounds	Total digestible nutrients in 100 pounds
Dried blood	69.1 lbs.	71.1 lbs.
High grade tankage	58.7 lbs.	87.0 lbs.
Oil meal	31.7 lbs.	75.9 lbs.
Soy beans	30.7 lbs.	85.9 lbs.
Alfalfa hay	10.6 lbs.	51.6 lbs.
Clover hay	7.6 lbs.	50.9 lbs.

It will be seen, therefore, that if the feeder is in search of a high protein carrier he must not overlook tankage and blood meal.

Putting the comparison upon a still different basis and showing the total digestible nutrients in a ton of the varions feeding stuffs mentioned, the following information is interesting:

Feeding stuff	Total digestible nutrients in 2000 pounds
Corn	1714
Oats	1408
Barley	1588
Buckwheat	1268
Molasses.	1184
Red dog flour	1584
Wheat bran	1218
Tankage	1740
Soy beans	1718
Oil meal	1558
Rye	1620
Skimmed milk	182
Butter milk	168

One often hears the argument presented that slaughter-house by-products, such as tankage and meat meal, are carriers of hog cholera germs or other infections common among swine. Of course this argument emanates from feeders who are not at all acquainted with the conditions under which the materials are manufactured. They are not carriers of disease unless the bagged material is shipped in cars that have carried diseased animals, or unless they come in contact with other freight or produce that has been consigned in cars improperly disinfected. They are no more apt to carry such germs than is any other feed carried by distribution agencies.

Granting then that the pig requires chiefly these two substances, the first problem for the feeder to solve is to determine which of the available feeds supply a unit of carbohydrate and a unit of digestible protein in the most economical form. He will find that those mentioned are generally the most useful for swine feeding, and it remains for him to determine the amount to use in his feeding mixtures.

If the farmer who has corn, barley, and oats intended for swine feeding, will supplement these grains with 5% of tankage or meal carrying not less than 60% of protein, he will satisfy every reasonable demand of the pig's system. Oftentimes gains would be more rapid and appetites more highly stimulated in case the percentage of digester tankage or meat meal were increasd to 6, 7, 8, or even 10 per cent.; but one would never be justified under any circumstances in feeding more than 10% of these materials. The tankage can be incorporated in the grain mixture where the materials are ground; but if one is feeding ear corn it is a simple matter to mechanically mix the tankage with water and supply it in this form.

If pigs are foraging on areas yielding alfalfa or any of the clovers an even smaller amount of tankage should be included in the grain mixtures. Nevertheless, it will be found that the feeding value of a bushel of corn or a bushel of barley will be increased as much as fifteen or even twenty percent where a minimum of five percent of tankage or meat meal is fed regularly.

It is an old legend that advises the farmer or stockman to grow what he feeds and to feed what he grows, yet if it is permissible for him to modify this practice it would seem that the purchase of digester tankage or meat meal might prove the exception, especially where pigs are being finished for the market and it is desired to put on the greatest possible weight in the shortest length of time at the least possible cost.

We are beginning to realize more and more the importance of feeding qualities in our market animals. The successful breeder must cling to that type of early maturing animal, popular both with the feeder and the butcher, and one that will efficiently convert a limited variety of farm crops into meat at a profit. It is not necessary to use the lead pencil in balancing a ration for growing or fattening swine, for there is such a thing as one becoming so technical that he evades the practical. Digester tankage and meat meal are in reality safety valves that induce rapid and economical gains and, while many of us believe that there is no occassion for the prevailing high price of these materials, we cannot deny but that even at $125 a ton the best grades of tankage supply a pound of digestible protein with the greatest economy.

The choosing of feeds and the determination of the amount to use is only one problem in pork production.

Sanitation, prolificacy, quality, and dressing percentage must each receive a share of the breeder's attention.

An animal, especially a pig, without an appetite is of little value, yet if the pig's appetite is not satisfied with food stuffs that supply all of the elements necessary for regular and normal gains, it is clear that the best results will not be obtained. Skimmed milk or butter milk are perhaps the greatest competitors of tankage or meat meal. It is doubtful if the feeder is ever justified in attempting to produce commercial pork unles he has available either dairy by-products or the higher grade by-products from the slaughter-house.

Handling Motors in Cold Weather

By Professor F. A. Wirt, Farm Machinery Specialist, Maryland Agricultural College

At this time of the year and until the warm weather of spring comes again, every owner and operator of a gas engine, either stationary, automobile, truck, or tractor expects more or less trouble in starting and in handling his engine. While more or less difficulty is to be expected, the careful operator can do much to reduce the annoyance involved in operating gasoline motors durin cold weather.

Many cautious operators follow the splendid practice of inspecting carefully before winter weather sets in, the ignition and carburetion systems of their engines. They frequently find that an electric wire needs replacing or wrapping with electric tape at some point, the points in the spark plugs must be closed, the contact points in the distributor or magneto require attention, or the electrodes used on many stationary gas engines must be cleaned.

Draining the carburetor and the sediment bowl is particularly desirable. Gasoline, water and dirt do not make an explosive mixture as everyone knows and if the sediment bowl becomes filled with dirt and water this highly undesirable foreign material finds its way into the carburetor, if they do not shut off the flow of gasoline. All connections between carburetor, intake manifold and cylinder block must be tight, otherwise air leaks will permit too lean a mixture at low speeds causing misfiring. Such leaks have greater affect when the engine is cold consequently they deserve attention.

Overhauling the ignition and carburetion systems and other parts of the motor as well will prevent much of the trouble experienced in cold weather for all details of engine operation must be more nearly correct at that time. The more common expedients which may be utilized when the mercury fails to rise very high are mentioned below.

Draining Radiator

A frozen radiator or cracked water-jacket is a ghost that haunts most owners of automobiles and tractors during the winter. Time and again when every precaution seemingly was taken the owner has discovered some cold morning that he has a real repair bill to pay and, worse, he cannot use his machine.

The radiator, or the water hopper in a stationary gas engine should be drained every night when there is likelihood of the temperature getting down to the freezing point. Radiators are made to radiate the heat rapidly so when it becomes cold with the engine idle the water in the radiator quickly comes to the temperature of the outside air.

All drain-cocks on the radiator and the water pump, and plug in the bottom of the thermostatic regulator if present must be opened. By running the engine a few minutes after the water is drained any moisture that might be left will be driven off in the form of steam.

A very simple precaution it seems but every year hundreds of motors are frozen up because the owners thought: "Well, it won't freeze tonight." A farmer owning a two cylinder tractor had this experience last winter. It turned cold during the day while he was cutting wood so he deemed it very advisable that night to drain off the water. He did so but failed to notice that one drain-cock was clogged. A piece of wire and the trouble would have been removed but next day a cracked water-jacket was the result.

One afternoon as snow began to fall a boy was sent out to drain a 30-60 tractor which had been used only a few minutes before. He opened the drain-cock to the radiator but overlooked one in the water pump. The result was a cracked water pump jacket and a cracked water pipe, all of which cost money and could have so easily been prevented.

If the automobile, truck, or tractor is in almost constant use an antifreeze solution may be advisable. In very cold weather kerosene can be used very successfully; however, there should be no leaks in the cooling system. Denatured alcohol 30% and water 70% is an effective and harmless solution which will not freeze at a temperature of 10° below zero. The addition of 10% glycerine, it is claimed, will prevent the alcohol from evaporating so rapidly. When water is added, alcohol must also be included to maintain the proper mixture. One disadvantage of this solution is the fact that alcohol evaporates more rapidly than water, consequently, the mixture tends to become weaker.

Commercial anti-freeze solutions are on the market and can usually be purchased from the local garage. Automobile and tractor manufacturers, also radiator repair men to the writer's knowledge do not recommend their use. Some users claim that their use is injurious to certain cars and not to others. As far as their use in tractors, trucks and stationary engines are concerned, it would seem better to drain the radiator rather than make any use of any anti-freezing compound.

When extremely cold it is best to drain out the system and take no chances.

Starting a Cold Motor

Many simple expedients exist for making it easier to start a cold motor. Many operators only use one scheme which they have found successful but frequently the whole list must be exhausted before the engine responds. The trouble is caused by the slow evaporation of cold gasoline and the congealing of the gas engine oil. An explosive mixture consists of one part of gasoline vapor and 8 to 13 parts of air so the cause of our trouble is easily understood.

The spark should be retarded and the throttle opened about ¼ to 1/3. It is a very common mistake to open the throttle too far. It may or may not be necessary to use some of the schemes mentioned below before cranking.

Spark Plugs

In cold weather moisture frequently collects on spark plugs resulting in a short circuit, consequently, the plugs should be cleaned at close intervals. It is always a good policy to wipe off the outside surface of the plugs before attempting to crank the machine.

If the current is supplied by dry cells it is advisable to keep them in the house at night where they will be warm. Cold cells do not furnish enough current for starting but if warm will cause no trouble. As long as current is drawn from the cells the electric action will keep them active. If the current comes from a magneto, it should be protected from the elements.

Many operators remove the plugs on a cold day, pour in a little gasoline and set fire to them. This procedure drys out the plugs and heats them making starting much easier. It is frequently resorted to when priming is not sufficient. The writer has personally used this scheme very successfully to start an automobile engine when all other methods have failed.

Hot Water

Hot water for the radiator or water jacket is the sovereign remedy for cold motors. If nearly boiling hot when put into the machine it is usually not long until no trouble is experienced in starting the motor. If the motor is very cold, however, something else must be resorted too.

The application of cloths soaked in hot water and wrung dry to the intake mainfold will prevent condensation of gasoline in the manifold and can be used advantageously in many cases.

Priming

High test gasoline evaporates more rapidly than ordinary grades and if obtained easily the man who uses a gasoline engine in the winter can well afford to buy one or two gallons for this purpose. If not available, a mixture of one part either to 4 or 5 of gasoline will do. It is just for priming, however, that these fuels may be necessary. If using common gasoline the priming should be a little heavier than in summer. Quite a number heat gasoline in a bottle which can be placed in hot water with safety. Gasoline heated in this way tends to evaporate rapidly when bottle is uncorked and poured into priming cocks. There is a big tendency, however, for it to condense on the cold cylinder walls.

Many practical tractor owners will prime their motors with ordinary gasoline and then go about their work for 15 or 20 minutes, when they return to crank the motor. This interval has given the gasoline time to evaporate and form an explosive mixture. If the weather is not too cold this scheme may be all that is necessary.

In addition to priming, or without priming at all, the needle value of the carburetor can be opened about ¼ of a turn, then choking the air inlet the crank can be turned a few times. This procedure is quite successful under most conditions. After the motor begins to fire the needle must be turned back to its original position, using the choke occasionally if needed.

One cold winter afternoon, a traveling salesman who drives a flivver stopped at a hotel in a small Maryland town. He drained his radiator leaving the machine stand on the street in front of the hotel. The next morning, quite early, he got a bucket of hot water and filled his radiator. Then he began to crank, he cranked and he cranked, then his friend cranked. Once in a long while the motor would cough but that was all. After about twenty minutes of this strenuous labor they were about ready to hunt a garage man when the writer happened to notice the trouble and suggested that the needle valve on the carburetor be opened ¼ turn. They did so and the motor started right off. After being warmed up the needle valve was moved back to its former position.

Warming Up A Cold Motor

"Let the motor turn over slowly when warming up" is the best advice ever offered by the manufacturer. It takes time for the heat from the explosions to thoroughly warm the engine and very little is gained by running the engine rapidly. Turning over slowly with a retarded spark is by far the best way to accomplish the desired results.

Another consideration is of even greater importance, which is the affect on lubrication of bearings and pistons when the crank shaft is rotating at a high rate of speed before thoroughly warmed. Under these circumstances the oil does not reach the bearing surfaces, rapid wear follows and sooner or later the owner has a repair bill of an amazing size. But more about lubrication of cold motors later.

The length of time required to warm up a motor depends naturally upon the temperature and the nature of the load. The engine cannot pull a maximum load until hot, a fact which must always be taken into account. If it is an automobile or truck with a light load, a few minutes will suffice. Then, by judicious use of the choker and of the clutch the machine can be set in motion and the engine not stalled.

If it is a tractor or a stationary gas engine, only a light load can be handled until the engine is warm. Extreme care should be observed in handling the clutch and applying the load to the machine driven or pulled by the tractor. It is far better to wait a few minutes for the engine to warm up than to kill the motor and then have to crank it again.

Operating a Motor on a Cold Day

Keep the water hot. To obtain the best results from a gasoline engine the water in the radiator should have a temperature of 160° to 180° F. A hood cover with an adjustable opening in front of the radiator is almost necessary on an automobile equipped with a pump circulating system and even on a thermo-syphon cooled engine it will be found very advantageous in warming the engine quickly to that temperature at which the motor will utilize the gasoline most economically. A thermometer device attached to the radiator cap, sold by garages and auto accessory shops, will inform the driver of the approximate temperature of the cooling water and by its use the use of the hood and 'hood cover can be better regulated.

Snow Flake Potatoes Grown by Fred Hamilton, Broome Co., N. Y. Over 90 percent No. 1s.

Cardboards are frequently placed in front of truck radiators and seem fairly satisfactory. When standing still, both the auto and truck radiators should be covered in order to retain the heat as long as possible.

With the tractor, it is necessary to place cardboard or some other similar material in front of the radiator so that it will not become too cool or freeze when operating. A hopper cooled stationary gas engine will usually need no covering.

Lubrication in Cold Weather

When gas engine oil becomes cold it congeals or becomes so thick that it will not flow. With very few exceptions oils that are satisfactory at ordinary temperatures or after the engine is warm will not flow at freezing or colder temperatures. So, if no precautions are taken when a cold motor is started, the dippers on the connecting rods of a splash or modified splash lubricated engine will cut thro the oils in the trays and no oil will be splashed on to the piston walls and piston pin bearings and connecting rod bearings.

A force pump lubrication system is very little, if any, better. Burnt out bearings and scored cylinders is the payment exacted for lack of attention to this important item so frequently neglected. Every spring the garages reap a harvest from this source of motor trouble.

It has already been mentioned that motors should by all means be warmed up slowly and it should be added here, the lubrication closely watched until normal conditions are reached.

In real cold weather more care must be exercised. On a tractor equipped with a mechanical oiler the oil should be drained when the engine is stopped. Before starting the motor next time the oil can be heated to nearly a boiling temperature and the mechanical oiler refilled. Then if the hand crank is turned 40 or 50 times the bearings will be supplied with oil.

If the tractor oil supply is carried in the crank case, the safest way is to drain the oil from the crank case while warm and before starting the motor again heat the oil as suggested above. The residue that has settled in the bottom of the receptacle should not be poured back but fresh oil supplied. This method requires a little time but is a well-paying investment. By using a can of convenient size and shape the operation will be greatly facilitated.

Oils intended for cold weather which do not congeal as readily as the oils commonly used can be purchased, however, they are not quite so satisfactory and should never be used for any great length of time in tractor motors.

The glass, sight-feed lubricator found on the stationary gas engines can be unscrewed and heated on the back of the stove being careful to not apply heat too quickly and not getting it too hot. After replacing on the engine, the lubricator can be set to drop more freely until the engine is thoroly heated.

The lubrication of automobiles because of their comparative small oil supply can be given the proper attention by not maintaining the oil level at maximum and adding a pint or quart of oil heated to nearly boiling temperature before starting the motor. If in constant use extreme care must be used in warming up the motor, adding the heated oil if it will not rise the level too high. For a car in daily use it would require too much time to drain the crankcase as in the case of the tractor but every precaution should be exercised.

Storage Battery

Winter driving of automobiles and many trucks requires much electric current from the storage battery to furnish light and operate the starter. The care of the battery is a story in itself but it might not be amiss to mention here the importance of keeping the battery properly filled with distilled water and fully charged.

The electrolyte used in storage batteries will freeze as follows:

Sp. Gr. 1.120, battery empty, 20 degrees above zero.
Sp. Gr. 1.160, battery ¾ discharged, zero.
Sp. Gr. 1.210, battery ½ discharged, 20 degrees below zero.
Sp. Gr. 1.260, battery ¼ discharged, 60 degrees below zero.

It will be observed that a fully charged battery will not freeze in ordinary temperatures.

FARM LIFE WORTH LIVING

Almost the entire stress of farm literature these days is placed on money-making. Farm living is so trite it is taken for granted. But things taken for granted die out and are lost—witness: spelling, and acquaintance with good English diction. One must have a cash income, even on a farm; but 16 hours a day slavery to farm work in order to get rich so one can live comfortably puts the cart before the horse. Other men get rich on eight-hour's work or less, and the farm has a handicap of an extra eight hours. The man who keeps up his farm and its fertility, pays all his bills and enjoys to the full all there is to enjoy on a farm, raises a family of free and happy children is rich if he could only believe it.

Efficiency counts, but less in the line of doing full work with one hand than in the line of doing requisite work in less time and having the power of enjoyment left. It lies in the direction of further invested capital, for that carries an annual charge of ten per cent. for depreciation, and six per cent. interest. The average farm is apt to be over-capitalized now, necessitating hours of work daily to carry the over-head.—C. H. D.

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VOLUME 46 NUMBER 24

Our job is to serve our readers. Whenever and wherever we can help you, write us.—The Editors.

A Valuable Feature

WE are glad to announce to our readers that we have secured one of the best informed writers on the feed market in this country to write at least a monthly letter for Pennsylvania Farmer on the feed situation. His long experience and recognized ability in this line will make his letters a feature that we are sure our readers will appreciate, since they will get from the letters information on prices and supplies that has been almost unobtainable here in the east. The writer is in no way connected with any feed firm or agency and is thus able to give intelligent, unbiased information. The first one will appear in next week's issue.

Grange Redeems New Jersey

NEW JERSEY has been in the limelight during the past year because it was one of the "small group of willful" states which refused to join the others in ratifying the Eighteenth Amendment. Again, certain politicians got a heap of notoriety for themselves and the state by coming out flat-footed in favor of circumventing the law so far as possible; then a candidate for governor won out on an open declaration that he was opposed to the prohibitory amendment. All this made others wonder whether New Jersey was saturated.

As an answer to this query a resolution passed the New Jersey State Grange last week without a dissenting vote, urging the legislature to ratify the amendment at once. This is most cheering and is another evidence that a body of farmers may be trusted to be on the right side of a question and to do the right thing at the right time when a great moral issue is at stake. Hats off to the farmers of New Jersey and let this incident serve as a warning to the liquor interests that the better-thinking element of the state means to redeem its good name.

Pork Price Discouragements

WHILE we wish in no way to justify the decline in hog prices during November, nor to concede that it is fair to the farmer even if it be a natural turn of the market, we wish to caution well established raisers of hogs not to be stampeded into closing out or even making a great reduction in breeding stock. Preparation for raising any kind of livestock—if they are worth-while animals—is a work of years and it is a serious matter to dispose of foundation stock because of a temporary period of reduced profits. Unjust as it may be, it is nevertheless likely that farm products will be first to go on the toboggan in the general lowering of prices which is sure to come. In spite of this it will not pay farmers in the long run to "throw up the sponge," if it is at all possible to continue until things are adjusted to a normal basis. It is the part of wisdom, however, to make such reductions in out-put as circumstances indicate to be good business. The world demand for fats which existed at the close of the war was abnormal and could not be expected to continue, especially at the prices which prevailed the past two years.

Writing for Print

EVERY once in a while it is necessary to repeat a few rules to guide those who send a manuscript for publication. While we do not ask nor expect perfection as to style, there are a few things which all should observe and which do not require special training or great learning. These rules are:

1. Write only on one side of the paper.
2. Leave a margin of one-half or three-quarters of an inch down the left hand side of the paper for corrections.
3. Write as plainly as possible and be careful in spelling proper names.
4. Write letters on a separate sheet of paper.
5. If you use a type-writer, double space the lines. Single space leaves no room for corrections.
6. Fold manuscripts—do not roll them.

These are all simple rules and can be followed by the most inexperienced writer. Let them discourage no one who has something to say; we invite the fullest expression. Readers have often told us that they enjoy the short, personal contributions as well as the special articles. Don't be afraid that you can't say it well enough to print. Send it along. The editors will fix it up. That's what they are for. This is a good place to say that our stock of poultry articles is pretty low just now, and if you have had some experience that would be good for others to know, why not pass it along?

German Potash Situation

THE Bureau of Foreign and Domestic Commerce has received a report from "a reliable source" which gives some inside information upon the potash situation in Germany. It states that German agriculture consumed about 87 percent of output of the mines in 1917, and only 55 percent in 1913. Because of the coal shortage only a small part is now being refined. There seems to be very little stock on hand, only about 25,000 to 35,000 tons of muriate at all mines. The condition of the mines is good. Normal labor conditions have not been established and efficiency is quite low. Shorter hours are demanded and governmental conditions keep laborers upset mentally. The investigators were informed that all items of cost of production have greatly increased over prewar costs—labor about three times, coal, steel and other materials much higher. The prices at which potash is being offered for export to America are about double on the low grade goods and about three times higher than prewar prices on refined salts.

The Tri-State Meeting

THE ANNUAL meeting of the Tri-State Milk Producers' Association was held in Philadelphia on December 1, a report of which we hope to present next week. This is one of the livest and most effective organizations of farmers in this part of the country, and the officers deserve great credit for the able manner in which the affairs of the association have been managed. They have succeeded in procuring for producers a price for milk which is more nearly a just one, and at the same time secured the esteem and co-operation of the dealers and the public.

One point in President Willett's address (printed in last week's issue) deserves the careful consideration of dairymen in every branch of the industry, and that is, the membership in the association should be greatly increased. Out of the probably 30,000 dairymen in the district, only 10,500 belong to the organization. The remaining 20,000 men are enjoying the benefits derived from the work of the association without carrying any of the responsibility or contributing to the upkeep of the work. The district covered by the Dairymen's League is much more completely organized and is better able to present a united front when the need arises.

One of the chief reasons why it was possible for the Tri-State organization to succeed so well with this partial enrollment of the dairymen was the spirit of fairness on the part of distributors and the fair treatment which the press of the district gave the market-milk question. All these factors were entirely different in New York, making complete organization necessary. But who knows when a like necessity will arise here? The sensible as well as the right thing for every dairyman in this district to do is to join the Producers' Association.

New Features in Agricultural Census

AMONG the new features included in the approaching 1920 census of agriculture will be a series of questions relating to the amount of corn and other crops raised for silage purposes. These statistics on silage, which are to be collected by the Bureau of the Census in accordance with the recommendations made to that Bureau and to Congress by the United States Department of Agriculture, are expected to furnish accurate and comprehensive figures on this important phase of farming which have heretofore been lacking. The facts and figures gathered in the census on this subject will be tabulated, so as to show what each county as well as what each State produced in the way of silage during the year 1919.

The Census Bureau also announces the inclusion in the farm schedule of questions to show how many farmers own tractors and automobiles and how many have heating and lighting plants and telephones in their homes. These questions are designed primarily to make known the better living conditions and modern improvements on farms in all sections of the country. The Census Bureau, including these questions for the 1920 census, was guided by suggestions from leading farm economists as well as by communications from farmers' organizations.

What the "Answers" Reveal

THE interest which has been aroused by the query as to why girls leave the farm has exceeded our expectations. People of all ages have written us expressing their appreciation of these letters. We believe they are more suggestive and enlightening than any number of parlor discussions of up-lift subjects, or the conclusions of rural sociologists. We have heard the "old folks" discuss this question at farmers' gatherings ever since we were boys, but too often the discussions revealed the fact that the speakers did not understand their own young people—their hopes and aspirations. It is a common mistake to underestimate the intelligence and the serious purposes of our young people, and to jump at the conclusion that they are frivolous because they exhibit the natural buoyancy of youth.

The answers which the girls have submitted in answer to "Bachelor's" thinly veiled criticism show that as a class they have:

1. A natural love for the country.
2. High ideals for themselves, for others and for their homes.
3. Ambition to be useful and to achieve something.
4. A conscientious loyalty to family.
5. A spirit of independence and a desire to exercise it.

Should not these qualities cause us to rejoice? May not parents and others who have unfairly criticised the girls take heart and set about to make such changes in customs and conditions as will meet their desires and give an outlet for their God-given impulse to live and grow. We dare not make life a straight-jacket or rack-wheel upon which to bind others.

Of course, back of all this is an economic question and we want to fore-stall any come-back from those who will say, "farming will not afford better conditions." The answer to this is, farmers have it within their power to correct any political or economic inequalities which exist if they would but exert it thru organization. Will they do it? Is it not worth while when the future welfare of their business and their young people depend upon it?

HARRISBURG LETTER

Constitutional Revision.—Pennsylvania begins this week the revision of its constitution, efforts launched years ago to bring about changes in the basic law of the commonwealth having culminated in enactment by the recent legislature of a commission to make a study of the document and recommend changes. To all intents and purposes the Commission is a committee of the legislature because its powers are only recommendatory and whatsoever it does must pass not only the legislature of 1921 but that of 1923, going before the people in 1924. Hence the power of review and the intervention of time for study are fully safeguarded. It is to be assumed, however, that owing to the prestige of the membership of the commission and the care which will be exercised that its findings will receive approval of the next legislature and that the session of 1923 wil follow them, as it must if the matters are to reach the people. The plan of recommendation was preferred by men of all parties and many students of the times to the ancient system of submitting to the people the question whether they wished a whole new constitution which would have meant an election on that subject and for delegates, a convention and a submission of the new document. New York spent a million dollars on such a procedure. Pennsylvania is making what some may call an experiment and has appropriated $60,000 for the purpose. The Commission contains women and business men as well as lawyers, if such distinctions can be made. It will be in session here most of a year. Its members are unpaid except for expenses. The plan is to make studies and later on to give hearings. Its powers end with recommendation to the legislature of 1921.

Some probable changes.—It may be safely said that one of the changes which will be made will be the right to grade taxes. This has been a subject uppermost in the minds of many students of affairs and may bring relief to rural districts where the taxation problem grows more acute. Indeed, taxation will be the foremost subject for discussion and it comes at a fortunate time when federal and tax authority in that direction is being exerted to unheard of extent. Provision will undoubtedly be made for a more flexible power to issue bonds .Now it is restricted to defence. The popular approval of issues will stay but the long period of waiting for approval of a bond issue for roads or something else will likely be shortened. Material changes will be made in the way of conferring power of local self government, while some arbitrary rulings made by the highest court as matters of public policy will be adjusted. The matter of appropriations will be one for serious consideration and the hospitals and homes which receive grants and give the State no representation may have some obligations placed upon them, while the creation of permanent funds for school and higher education will receive attention. No sweeping alteration in the present scheme of government is at all probable. Most of the changes will be along the lines of criticism, it may be said, speaking generally.

Institutes Successful.—The State Department of Agriculture appears to have been more successful in regard to its new plans for farmers' institutes than in enforcement of the dog license law. The general tenor of reports coming here on the institutes held during the first week shows that there was no lack of discussion and that in most of the places the farmers took advantage of the opportunity to exchange views and to quiz the lecturers regarding the special lines of production and the problems of the day. The attention given to marketing matters was one of the features of the series. Much appreciation of the plan of having the speakers familiar with the products of the locality was heard.

NEW YORK LETTER

Great Attendance Expected for Farmers' Week.—The State College has begun planning for the Farmers' Week events earlier than ever befor. It will be held February 9-13, inclusive. The keynote of the meeting will be marketing and good rural economics, as they affect not only the farmer but the householder. A new plan of distributing the programs to all prospective visitors well in advance of the meeting will be in force. This event marks the close of the winter short courses, and 5,000 persons are expected this year. One whole day will be given to discussion of the office of the country and daily press in rural life—when successful editors and writers will discuss with readers methods of making this service a more vital factor in farm life today.

Sugar Matters.—The Seneca County food administrator is back on his job trying to prevent undue hoarding of sugar by householders and the requirements by retailers of a purchase of other groceries in order to secure sugar. The police in some other localities are watching certain householders suspected of laying up stores of sugar. Recent circulars received by food administrators show the practice of selling sugar only with an order to be illegal. Some of our groceries even have signs up saying no sugar will be sold except with orders of other goods—usually 50 cents, but often $1 in amount.

Furs High and Plentiful. Trappers in Saranac Lake are making $300 to $500 a week—Some schoolboys are able to make $65 per week. Prices are 40 per cent. higher than last year. One buyer in that region returned from there with an automobile load of furs valued at $6,000.

State's Forestry Policy.—The Stato is cutting from three to five times more timber than it is growing each year, and manufacturing firms which use large quantities of lumber are moving to other fields. A new forestry policy, outlined by Conservation Commissioner Pratt, in a letter to the Governor and the Legislature, includes a unified plan to protect and develop the forests of the state. It is the first broad guage response to a waving by federal authorities who have taken a timber survey that the east is rapidly losing its timber, and that its protection is one of the most important questions of the day. The state would be divided into ten districts each with an experienced superintendent. Such a man would co-operate with farmers in replanting and use of woodlots and report waste lands for such purposes to the state. A new and more efficient system of fire protection, as worked out in the Adirondack and Catskill forests is to be installed.

Influenza Quilled.—Despite warnings of probable ravages of influenza this winter the state health department reports 321 cases in October as compared to 400,775 in October of 1918. A gratifying fact. Methods of maintaining healthful conditions in diet and ventilation have been scattered broad cast. One of the main facts brought out in the line of prevention is that a free use of milk in the diet builds up the resistance so that but 5 per cent of milk users, even in the height of the epidemic last year had the disease and but 1 per cent died as compared to 80 per cent. in families of non-users of milk with 40 per cent. of the cases fatal.

NEW JERSEY NEWS

Planning Night School for Farmers.—Agriculturists and persons employed on farms will have an opportunity of bettering their education along farm lines in the very near future, when a night school for farmers in which anybody interested in agriculture is eligible to admission will be opened in the agricultural town of Hopewell in the Northern part of Mercer County. E. R. Beaver, agricultural instructor in the Hopewell High School, made this announcement at the annual meeting of Mercer Grange, No. 77, which was held at Hopewell.

Large Corn Show.—A corn show held at Edgewood during the week almost reached the proportions of a community fair. There were 16 exhibits of corn, 10 of potatoes, 17 of apples, 2 of pears and 17 of pumpkin pies. Prizes were awarded to all of the holders of the champion exhibits. One of the interesting features of the event was a talk on organization for milk shippers delivered by H. D. Allebach, vice-president of the Inter-State Milk Producers' Association.

Successful Corn Show.—A most successful corn show was held at Hightstown by the Hightstown Grange. Each exhibit consisted of 10 ears with one ear as the best for the exhibition. The competition was open to members of the grange and those who were not, but it was necessary that the corn placed on exhibition had to be grown by the exhibitor. An address on the selection of good seed corn was delivered at the show by Mercer County Farm Agent Barnhart. A community corn show was also held near Ewingville as a preliminary to the Mercer County Corn Show at Lawrenceville. Fred Gardner of Robbinsville, who was the judge, gave a talk on "Good Seed and Other Corn." The Mercer County Board of Agriculture supplied the ribbons for the show. Each exhibit consisted of 10 ears and one ear shown as the "Best Ear." The Lawrenceville Grange also held a corn show after its regular meeting, while there was also a show at Pennington in connection with a session of Pomona Grange.

Farmers Welcome Rabbit Hunters. Farmers who have young orchards coming on are welcoming rabbit hunters in various parts of New Jersey this season, and a number of the large fruit farms in a certain section in the southern part of the State have been thrown open to the gunners. The fruit growers claim that they have sustained heavy losses by the rabbits "ringing" the bark of the young trees in Wintertime when other food is scarce in the open. While farmers are eager to see the rabbits exterminated, particularly in section where fruits is raised extensively, the cottontails seem to be the thickest in those places .Wherever possible, New Jersey farmers and fruit growers are trying to protest the pheasants, altho the game laws of the State makes this an open season for the male specie of this bird. Pheasants and quail are credited with destroying many orchard and farm pests.

New Jersey Crops.—The final revised estimates of crops in this State up to November 29 last, show the total production of corn for 1919 was 12,070,000 bushels and the total value (Nov. 29 price basis), $17,018,700; wheat, total production, 1,962,000 bushels; value, $4,297,000; rye, total production, 1,377,000 bushels; volue, $2,162,000; oats, total production, 2,378,000 bushels; value, $1,807,000; buckwheat, total production, 176,000 bushels; value, $162,000; hay tame), total production, 494,000 tons; value, $14,326,000; hay (wild, salt grass), total production, 47,000 tons; (no value given), potatoes, 11,600,000 bushels; value, $19,720,000; sweet potatoes, total production, 720,000 pounds; value, $2,945,000; cranberries, 142,000 barrels; value, $923,000; honey, total production, 720,000 pounds; value, $230,400; peaches, 898,000 bushels; value, $1,796,000; apples, 2,429,000 bushels; value, $4,737,000; pears, total production, 450,000 bushels; value, $765,000.

We Want YOUR RAW FURS

Put your own assortment on them and mail us a copy. If we cannot net you as much or more than you expect, we will return them to you, express paid.

WE ARE NOW PAYING FOR IMMEDIATE SHIPMENT AS FOLLOWS:

WE PAY FOR SKUNK

	No. 1.	No. 2.	No. 3.	No. 4.	
Minn., Wisc., Nor. Iowa, Dakotas	8.00	6.00	4.00	2.00	UNPRIME AS TO VALUE
Maine, New Hampshire, Vermont	7.00	5.00	3.00	1.50	
Northern New York	7.00	5.00	3.00	1.50	
New York, New Jersey, Penn	6.00	4.00	2.25	1.25	
Mass., R. I., Connecticut	6.00	4.00	2.25	1.25	
Mich., No. Ohio, Ind., Ill., No. Mo.	7.00	5.00	3.00	1.50	
Kans., Nebr., So. Iowa, Wash., Ore.	7.00	5.00	3.00	1.50	
Cen. Ohio, Ind., Ill., Md., W. Va.	5.75	3.75	2.25	1.25	
So. Ohio, Ind., Ill., So. Mo.	5.50	3.50	1.75	1.00	
Virginia, North Carolina	5.25	3.25	1.75	1.00	
Kentucky, Tennessee	4.50	3.00	1.75	1.00	
Arkansas, Oklahoma, Calif.	4.50	3.00	1.75	1.00	
Large Western Long Narrow Stripe, Prime.	2.00 to 5.00				

WE PAY FOR MUSKRAT

	Winter.	Large Fall.	Small Fall.	Kits.
N. Y., New Eng., Eastern Canada	3.00	2.25	1.25	.10
Michigan, Wisconsin	3.00	2.25	1.25	.10
Pa., N. J., Ohio, Ind., Ill., W. Va.	2.75	2.00	1.10	.10
Virginia, Carolinas, Md., Del.	2.50	1.75	1.00	.10
Kentucky, Tenn., Ark.	2.50	1.75	1.00	.10
Minn., No. Iowa, Dakotas	2.10	1.50	.90	.10
Manitoba, Alberta, Sask.	2.10	1.50	.90	.10
So. Iowa, Dakotas, Mo.	2.00	1.40	.90	.10
Wash., Oregon	1.75	1.25	.70	.10
BLACK RATS	3.00	2.25	1.25	.10

WE PAY FOR RACCOON

	No. 1. Large.	No. 1. Med.	No. 1. Small.	No. 2.	No. 3.	No. 4.
Wisc., Minn., Dakotas, No. Iowa	11.00	9.00	6.00	6.00	2.50	.25
Mich., N. Y., Canada, New Eng.	9.00	6.00	3.00	3.00	.75	.20
No. Pa., N. J., No. Ohio, Ind., Ill.	7.50	5.00	2.50	2.50	.75	.20
So. Pa., Cen. Ohio, Ind., Ill., W. Va.	6.50	4.50	2.25	2.25	.75	.20
Neb., Kans., So. Iowa, No. Mo.	7.50	5.00	2.50	2.50	.75	.20
So. Ohio, Ind., Ill., So. Mo.	5.50	4.00	2.00	2.00	.75	.20
Maryland, Del., Va., No. Carolina	5.50	4.00	2.00	2.00	.75	.20
Kentucky, Tenn., Ark., Okla.	5.00	3.50	2.00	2.00	.75	.20
Wash., Ore., Calif.	5.50	4.00	2.00	2.00	.75	.20
So. Carolina, No. Georgia	4.50	3.00	1.75	1.75	.50	.20

We also wish to call your attention to the fact that we do not mislead you by quoting prime skunk as extra large, large, medium or small.

MILTON SCHREIBER & CO.,
Dept. W, 138-140 W. 29th St. NEW YORK CITY

NOW IS TIME TO THINK OVER THE PROBLEM OF PRODUCTION

Men may be stubborn and refuse to work or do their best to increase their production. NOT SO THE SOIL. Give it what it needs and it will yield abundantly or even increase its production.

Many Soils Need Lime to yield their best. Lime on Acid Soils will insure better utilization of the fertilizers, and larger returns from the seed and labor expended per acre.

The use of hydrated lime means a sure economy and will save labor when liming is done. Now is a good time to order lime for next Spring.

Warner's "LIMOID" is pure Hydrated Lime manufactured from the old famous "Cedar Hollow" limestone. Can be stored in any dry place without loss.

CHARLES WARNER COMPANY
Wilmington, Del. Philadelphia, Pa. New York City

"LIMOID"

We Buy Empty
BAGS

We pay higher prices than most dealers and give quick returns. Deal with old established and reliable house. In business 30 years.

Send for our price list today and get more for your bags than ever.

References, Union Nat'l Bank, Phila.
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104 Callowhill St., Philadelphia, Pa.

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By

Securing LIFE INSURANCE of the Company which is loaning its MONEY on farms.

Write for rates of our SPECIAL POLICIES TODAY. TOMORROW may be TOO LATE.

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LIFE INSURANCE COMPANY
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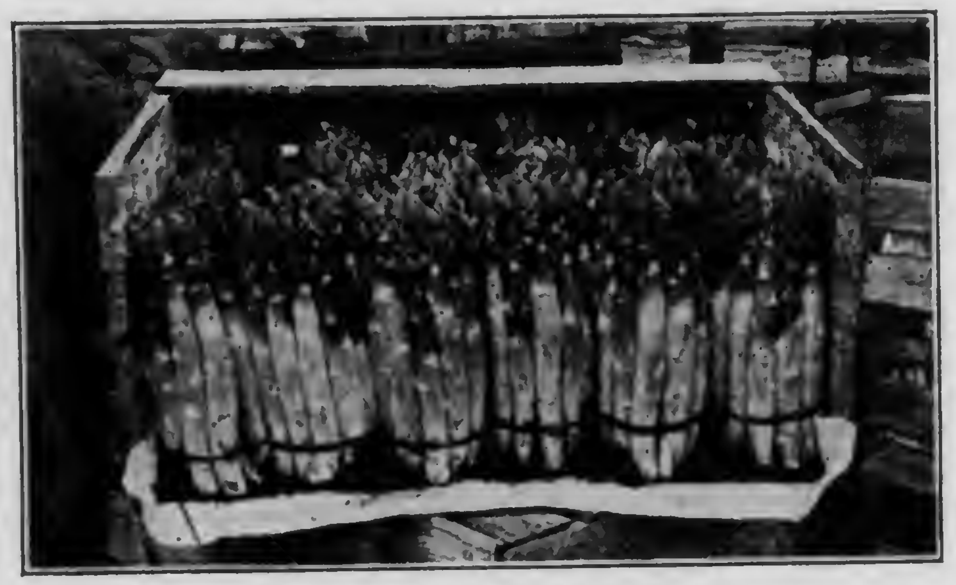
HORTICULTURE

SOME MOST PROFITABLE CROPS

All vegetable growers make their money out of a few crops and many of them lose money bothering with other crops as well. Just what the more profitable crops are must be determined by each farmer after he has become established and thoroughly familiar with his soil, crop requirements and market demand.

Mr. Lewis Duncan has a large market garden within ten miles of Philadelphia. He has found that his light sandy loam will produce extra early crops of handsome white radishes just when there is a strong demand for that commodity. The seed is planted in March and by May the soil is ready for a different crop. The only expense outside of planting and fertility is harvesting the crop. Therefore the crop has proven to be a profitable one for Mr. Duncan. He saw his opportunity and has developed it. He tried many strains of seed until he obtained something excellent. Then he began growing his own seed and each season he continues to improve his private strain of seed by careful selection. The illustration shows a box containing 50 bunches of radishes. Two layers of 16 bunches each in the bottom and 18 bunches on the top layer just fill the special crate.



Graded Asparagus Packed in Wet Moss

Asparagus has proven itself to be a very profitable crop for Mr. Charles Brown of Gloucester County, N. J. His light loamy soil is particularly adapted for the production of large, straight stalks of high quality. The Boston market has been paying the highest prices obtainable. Therefore, Mr. Brown grows the green asparagus to suit his Boston trade. Two dozen bunches are packed upright in a special asparagus crate. Wax paper is spread over the bottom of the crate and a layer of wet moss is spread over the water tight paper. When the bunched asparagus is stood upon the wet moss, the asparagus arrives in the Boston market in splendid condition. The stalks are carefully graded; the bunches are made up so that they will be compact and each bunch is tied with two pieces of red tape placed quite far apart. This adds to the attractiveness of the bunches and makes them appear to be at least as long as they really are. This may seem like a lot of work and extra trouble, but when the help is properly equipped and trained they can do their work very quickly and the "published finish" brings a splendid premium.

Few farmers think very seriously about the humble pumpkin except for cow feed. However, Mr. J. W. De Baun, within fifteen miles of the Newark, N. J., market is making a splendid profit from his pumpkin crop. He has developed a special strain to suit his market requirements. Pumpkins are taken to the Newark market in barrels. The retailers prefer uniform pumpkins, of medium size so that they will get from eighteen to twenty in a barrel. Mr. DeBaun polishes every pumpkin and packs them solidly in the barrel to within six inches of the top of the barrel. Then he selects four pumpkins, places them on their edge around the top of the barrel with the stems out and just above the top hoop. Then the stem is cut short on a small pumpkin which fits tightly between the four pumpkins and holds them all in their places in a very attractive manner. This arrangement is easily possible with pumpkins averaging twelve inches in diameter. Seed selection is what has made it possible to grow pumpkins of a desirable, uniform size. Furthermore, Mr. DeBaun does not grow his pumpkins in the corn field nor in out-of-the-way corners; he plants them by themselves on excellent soil so that a large yield is assured.

Just so it would be possible to each one of whom are particularly successful with a certain vegetable. Vegetable producers are planning next season's work now. Let us hope that in the future they will confine their attention to those crops which are proving to be their most profitable and plant the unprofitable crops only in the kitchen garden or else buy a supply for the table from someone who can grow them at a profit

STORAGE OF APPLES

The Pennsylvania Department of Agriculture, Bureau of Plant Industry, gives the following information about storing apples:

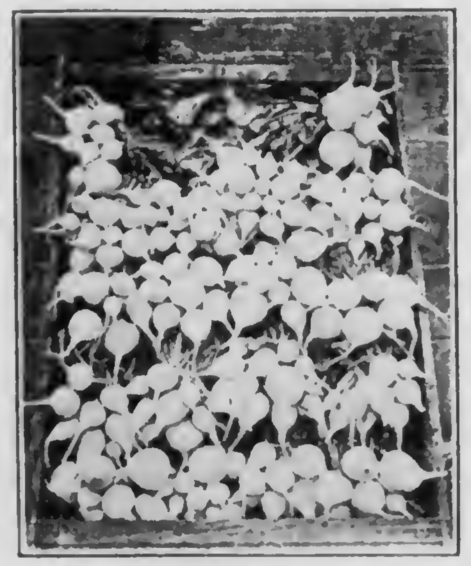
The ideal storage cellar for apples should be fairly dry and cool. The temperature should be kept as near to freezing as is consistent with safety. This low temperature prevents the development of rot fungi, slows down the ripening or maturing processes, and lessens evaporation of water—all of which tend to make the apples keep longer, and in better condition.

Stored apples also need fresh air.

They "breathe" very slowly at low temperatures and tho they need only a small amount of air they must have it regularly. To allow for this the fruit should be stored in shallow layers or shelves or crates so as to allow free passage of air to all the fruit. The whole cellar may be ventilated by a shaft or else frequent airing may be given by opening doors or windows on mild days.

When an apple rots the rot fungus will soon produce countless spores on the surface of the rot spots and these will drift about the cellar and spread the rot to other fruits. Pick the apples over at intervals and remove from the cellar all the spotted and rotten fruit.

A storage cellar should be thoroly cleansed before putting in a new apple crop, so as to avoid rot carried over from last year's storage. White wash is excellent for this purpose.



Radishes Graded and Packed for Special Trade

GROW MORE RED CLOVER

From the soil fertility standpoint red clover is the best legume to grow. It is the easiest crop to grow, the nitrogen does not leach out so fast as that of soy beans and cow peas, and it produces a larger tonnage of good forage. Alfalfa has some advantages because it is a year to year crop. Even at present prices of red clover seed the farmer cannot afford to omit the crop from his rotation.

APPLYING MANURE FOR POTATO CROPS

Experience has proven to me that a better and heavier yield of potatoes will be harvested where the manure is applied late in the fall instead of during the winter or early spring. Just why this result is obtained may not be explained easily. I suppose it is because when manure is spread upon the ground in the fall, the rains will carry the plant food into and thru the soil. Manure spread upon frozen ground may have the soluble plant food (liquid manure) washed away during the first rain. If manure is applied just before the ground is plowed for immediate spring planting of potatoes the manure will be in chunks, so that the rows of the growing crop will have less opportunity to get the benefit of the fertilizing elements. Besides, fresh applications of manure help the development of scab. Therefore if manure is to be applied for potatoes the time to make the application is as soon as convenient to do so. It must not be understood that manure is to take the place of fertilizer. The very best growers use a generous amount of fertilizers regardless of the applications of manure.—R. W. DeBaun.

CASE
J.I.CASE
THRESHING MACHINE CO.
INCORPORATED
RACINE, WIS.
U.S.A.

Illustration shows Case 10-18 Kerosene Tractor pulling 2-bottom Grand Detour Plow.

Remember This Trade Mark as Well as the Name of

CASE

The world-famous trade mark of the Eagle on the Globe identifies all machinery manufactured by the J. I. Case Threshing Machine Company.

Now, here's a straightforward, heart-to-heart statement of why you should know what this trade mark means to you—why you should give preference to farm machinery on which it appears.

You know the advantage and value of experienced, reliable farm help—the kind you can depend on through "thick-and-thin;"—the kind that "sticks" the year round if you need it!

That's exactly what you get—in mechanical form—when you buy machinery built by this company and bearing the good old trade mark of the Eagle on the Globe.

This company has been building superior machines for farmers for 77 years—probably long before you were born! Often our machines have been a little higher in price than others; but you could bet your bottom dollar on their dependability in "a pinch;"—on better work and more of it and over a long period of years.

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Kerosene Tractors
Steam Tractors
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Silo Fillers
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NOTICE:
We want the public to know that our plows are NOT the plows made by the J. I. Case Plow Works.

9,000 dealers and 31 branch houses throughout the United States will take care of you in the matter of sales, service and supplies. Apply to any of them for detailed information, or direct to us.

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Making Superior Farm Machinery since 1842

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Buy Your UNADILLA SILO Now

There's big economy in ordering your Unadilla Silo for early shipment.
1. A substantial discount pays big interest on your money.
2. It affords you opportunity to erect it when your time is worth least and when you can erect it with greatest care.
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Send now for our complete catalog, prices and early order discount.
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HARDER SILOS

NEW GAMBREL TOP Increases Capacity

BLEAK winter days don't discourage the Harder Silo owner —or his sleek milkers. Sweet, succulent silage comes each day from the Silo—good as June grass. A good company to be in, Harder Silo owners. Prepare now to save all your 1920 crop and turn it into milk—and dollars.

Write for the book which has shown thousands the road to dairy profits, "Saving with Silos." It's free.

HARDER MFG. CORP.
Box 18, COBLESKILL, N. Y.

WANTED—

Single men to work in large modern dairy barn. 350 head registered Holsteins. Must be good dry hand milkers. Wages $60 per month and board.

We might also use one or two experienced men to feed and milk cows on official test. Wages for this work depending upon experience and ability.

Write stating age and experience also give reference.

WINTERTHUR FARMS, Winterthur, Del.

William R. Compton Co.
Government and Municipal Bonds
Over a Quarter Century in this Business
14 Wall Street, New York
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Skunk, Mink, Muskrats
and all other kinds of Raw Furs wanted. Write for price-list and shipping tags. Twenty-three years in business.
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Daniel McCaffrey's Sons
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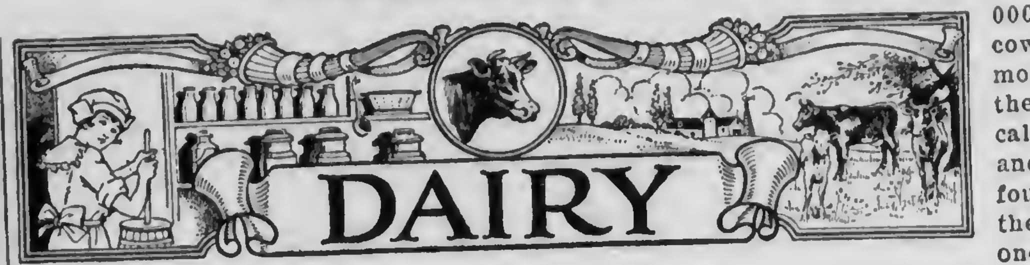


DAIRY

EASTERN DAIRY NOTES

Interest in dairy matters is keen in New York State. In Delaware. County the leading dairy county of the state, milk producers favor raising the dues for League support to two cents per 100 pounds of milk, and a resolution to that effect was passed and sent to the League board of directors, and to the Executive Committee. But first they would like to see every producer and surely every member of the League, paying his one cent—a very good argument.

Thinking dairymen everywhere approve this deduction and condemn whatever factor contributes to a failure to deduct this fee from all milk checks. Local secretaries can do a good service here as can individual members by reporting all dealers who neglect this important part of their contract with the League. It is to the interest of dealers to be lax about this as it means lack of funds for League work and that means more profit for the dealers.

Delaware dairymen believe the League should have more funds to put on a bigger advertising campaign to run the business of local branches more efficiently, and that there should be a reserve fund on hand at all times for emergency use to protect the organization from unjust attack.

New York consumers to the number of 400,000, mostly union men, and housewives clubs are boycotting milk, in a mistaken effort to reduce retail prices. It is hard to conceive the reasoning that leads to such movements as this . Producers are now so close to production costs that many have already been forced to close out their dairies. Auction sales of dairy cattle are more frequent in the sections affected by this boycott than ever before. When a dairy is once put out of business it is a matter of years to replace it and too many children and working people are already going without milk. This is exactly the sort of work needed to necessitate many more going without milk in the future.

Farmers believe that the Hearst publications are largely to blame for misdirected energy of this sort. They constantly misrepresent the farmers' cause and uphold the present order of things, and they believe that these publications should be censored by the government in the interest of the people. Never once do they advise their readers to work out a practical, sane, efficient and economical system of milk distribution as a solution of milk difficulties, but instead they constantly direct a fusilade of invective and misrepresentation against farmers.

With farmers getting 7.8 cents per quart for milk and with milk retailing at 30 cents for certified milk 20 cents for grade A milk by the quart or 12 cents by the pint, and grade B milk at 17½ cents per quart or 10 cents per pint—the farmer gets all the invective.

The recent milk drivers' strike led to a raise of wages that the dealers estimated at their own figures would cost them ½ cent per quart extra— True to their habit of years, instead of raising the retail price ½ cent they raise it considerably more than that. The December price to farmers is $3.68 per 3% milk. A year ago in December the price was $4.06 per 100 lbs. Yet the consumer pays more now than one year ago and the public is led to attack the farmer for the raise.

FAUVIC'S PRINCE
Grand Champion, Springfield, Mass., Show. First 12 Daughters Averaged 9576 lbs. Milk, 545 lbs. Fat.

Farmers are trying hard to reduce the cost of production, better breeding being the chief method. Many of the poorer cows are being slaughtered. Really good cows are very high around $200 each, and in good demand.

Steps are about to be taken to sell the big livestock sales pavilion at Earlville, owned by a stock company of Madison and Chenango county breeders. There is such a demand for high quality purebreads that there is no surplus stock to dispose of in this way, as in years past.

Herkimer County dairymen are urging the exchange of sires when usefulness is at an end in one group, deferring his disposal until his value is determined by his daughters' milking qualities.—F.

A PROFITABLE COW

Harry Smith, Lebanon Co., is the proud owner of one of the most profitable cows in this vicinity. This cow dring a period of eight months gave 12,700 lbs. of milk and in addition all the milk that the family used during this time which would make the figures approximately 13,000 lbs. The net profit on this cow's milk was $260. The ninth month the cow stood dry, and during the tenth she dropped a calf. The calf was sold for breeding purposes and after it was removed it was found that the cow again yielded in the sixties daily. A calf like this one is worth about $40 at this time.

The milk during the eleventh and twelfth months totaled about 4,000 lbs., making the record for the year of approximately 17,000 lbs., and the net profit over $300. This is a very fine record and Mr. Smith can feel justly proud of his cow.

When questioned concerning his cow Mr. Smith said that he did not know whether she was of pedigreed stock or not. His brother bought her with a lot of others while on a buying trip and she was very skinny and in poor shape generally at the time of the acquisition.

The figures of this cow's record are not guesswork. Her milk was weighed daily by Mr. Jonathan Brendle, the official weigher for the Hershey Chocolate Co's. milk receiving station at this place. He, as well as most of the other patrons of this station, is an old reader of Pennsylvania Farmer and will cheerfully vouch for the truth of this article.—R. I. W.

COW TESTER'S REPORT

Report of Official Tester for the Cumberland County, Pa., Cow Testing Association, for the fifth month ending November 15, 1919. A. A. Raudabaugh, Tester:

Number of cows in the Association.	385
Total number of "quality" cows during month	36
Number cows producing 40 or more lbs. of fat	20
Number cows producing 1000 or more lbs. of milk	34

Highest record in butterfat from 2105 lbs. milk made by a pure Bred Holstein owned by I. V. Otto, 84.2 lbs.

Highest record in milk made by a Pure Bread Holstein owned by I V. Otto, 2406 lbs.

Men having cows coming within the "quality" class:

Name	No. Cows	Av. lbs. milk produced
R. L. Seak	1	1001
J. H. Lear	2	1076
I. V. Otto	10	1755
J. B. Meixel	2	1145
H. A. Shultz	3	1140
J. W. Hertzler	1	940
G. L. Strock	14	1285
W. J. Kimmel	2	1323
J. W. Miller	1	894

P. L. Edinger, County Agent.

CONSUMPTION OF DAIRY PRODUCTS

Altho Uncle Sam is the champion dairyman of the world, he is only mediocre as a consumer of butter and cheese. The records of the per capita consumption of dairy products which are available are not directly comparable because the figures from many of the foreign lands are so old that they are almost moss-covered. However, here they are for what they are worth, as collected by the U. S. Department of Agriculture.

According to the latest figures now available, Denmark leads in cheese eating, the average Dane making away with 12.3 pounds of cheese per year; while Johnny Bull is second, having stomached 11.2 pounds. The

average Frenchman is credited with eating 8.1 pounds of cheese, while each Dutchman in the Netherlands consumed about 8 pounds of cheese. The average cheese consumption in Norway was 7.1 pounds; in Switzerland, 5.3 pounds; Italy, 4.8 pounds; Australia, 4.8 pounds; United States, 3.8 pounds; Canada, 3 pounds; New Zealand, 3 pounds; and Argentina, 2.9 pounds.

Australia led the world in butter consumption, with 25.6 pounds per person in 1913. New Zealand with 21.7 pounds per inhabitant, in 1914, ranked second. Other per capita butter-consumption records, for years ranging from 1906 to 1914, are: Denmark, 19 pounds; United Kingdom, 19 pounds; United States, 17.5 pounds; Canada, 16.3 pounds; Norway, 14 pounds; Netherlands, 11.3 pounds; Switzerland, 11 pounds;; Italy, 2.5 pounds; and Argentina, 1.7 pounds.

The most recent figures show that dairy products in the United States per capita run like this: Condensed milk, 0.49 ounce; skim-milk powder, 0.012 ounce; milk, 16 ounces; cheese, 0.13 ounce; butter, 0.76 ounce; and ice cream, 0.5 ounce.

BRADFORD CO., PA., COW TESTING ASSOCIATION

Report Ending November 18th

For the month ending November 18th, the five Cow Testing Associations of Bradford County, Pa., had 116 cows to produce 40-pounds or more of butterfat. Of this number, the Canton Association leads with forty-four, Eastern Bradford, second with twenty-eight, Laurel Hill, third with twenty-seven, Troy, fourth with fourteen and Wilmot fifth with three.

The high producing cow for the county for the month was a registered Holstein owned by R. H. Fleming. Her production was 77.1 pounds of butterfat. The second highest cow was a purebred Holstein owned by C. W. Newman. Her record was 75.5 pounds of butterfat. The third highest cow was also a purebred Holstein of the same herd. Her yield was 74.5 pounds of butterfat. The fourth highest cow was also a registered Holstein owned by Fred Bohlayer. Her yield was 73.8 pounds of butterfat.

In this county Cow Testing Association, work has been carried on continuously since July, 1913. The territory in the vicinity of Canton has been more constantly represented than the other sections of the county and testing work in that community has been more thoro for the past several years. This fact is good testimony for the number of high quality cows in the Association's Quality List during the past month. In fact the Canton Association in most of the months during the past year has had the greatest number of high producing cows.

There is an unusual and interesting growth of increase in the demands for pure bred cattle. Even tho Bradford County has over 200 breeders of pure bred cattle the local demands have absorbed practically all the surplus available for sale among our breeders. One Holstein breeder started six of his neighbors during the past year in pure breds. The breeders of Jerseys, Milking Short-horns and Guernseys have also experienced increased interest in pure breds.—D. K. SLOAN, County Agent.

Every rat costs the farmer at least two dollars per year to board.

IT MUST BE RIGHT

A HEALTHY CALF

Pratts,
CALF MEAL
Is Wholesome and Appetizing

Experts have tirelessly worked on the formulas — specialists have supervised the mixing processes — practical, hard-headed dairymen have tested *Pratts Calf Meal* in their barns. They all pronounce it a perfect substitute for *whole milk* in raising large, healthy calves.

IT IS RIGHT

PRATT FOOD COMPANY
CHICAGO PHILADELPHIA TORONTO

Peerless Feed Mill

Double crusher roll, machine-cut plates. Grinds better quality feed with less power, grinds green ear corn, small grains and alfalfa. Also furnished with cast plates. Sizes 1½ to 20 H. P. Write for prices and catalog.

Peerless Fodder Shredder

If you have 3 H.P. engine you can run this 14-inch machine successfully. Will pay for itself in one year's use. Will not pulverize blades and tops. Sold on thirty days free trial. Write for price and catalog.

A. M. DELLINGER, Lancaster, Pa.

ICE PLOWS TOOLS Plows $19.80 up. Wm. H. Pray, Mfg. LaGrangeville, N. Y.

TREAT Your Own Herd for **Abortion**
Stop Losing Calves! You can *wipe abortion out* of your herd and *keep it out.*

YOU CAN RAISE CALVES LIKE THIS
Roberta Olive Pontiac Korndyke 517243

Send for Free copy of the *Cattle Specialist* with questions and answers pertaining to Abortion in Cows. Answers every question. Tells how to treat your own cattle at small expense. Write
Dr. David Roberts Veterinary Co. 640 Grand Ave. Waukesha, Wis.

WHITE LIGHT FROM KEROSENE Beats Gas or Electric

BURNS 94% AIR
Aladdin
TWICE THE LIGHT ON HALF THE OIL
Agents Wanted

Make your home bright and cheerful, **saving one-half** on oil. Government and leading University tests prove this wonderful new Aladdin nearly five times as efficient as best round wick open-flame lamps. **Burns 50 hours on one gallon** common kerosene (coal-oil). No odor, smoke or noise, no pumping up, easy to operate, won't explode. WON GOLD MEDAL. GUARANTEED. Prove for yourself, without risk, by

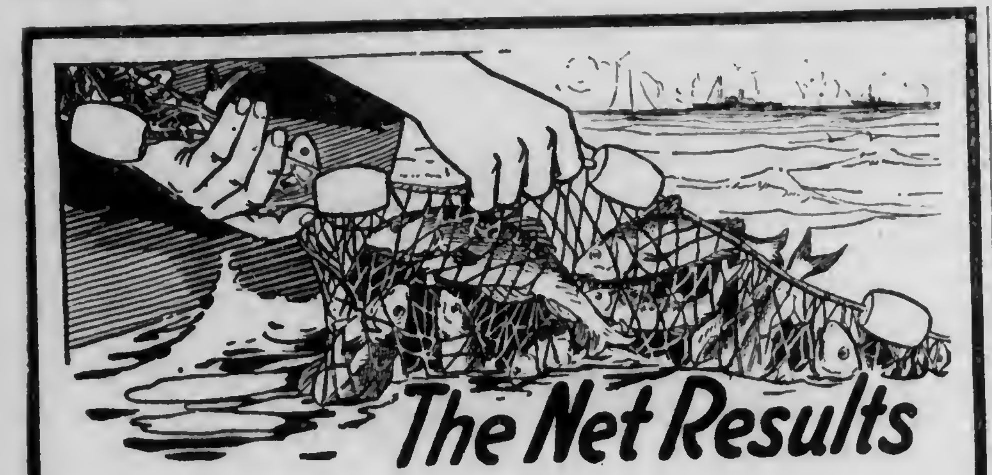
TEN NIGHTS FREE TRIAL

that Aladdin has no equal as a white light. If not satisfied, return at our expense. $1000 given anyone showing us an oil lamp equal in every way to this NEW MODEL 8 ALADDIN.

GET YOURS FREE! We want one user in each locality to whom customers can be referred. In that way you may get your own without cost. Be the first and write us quick for **10 DAY FREE TRIAL OFFER** and learn how to get one FREE.

MANTLE LAMP CO., 420 Aladdin Building, CHICAGO
LARGEST KEROSENE (coal oil) MANTLE LAMP HOUSE IN THE WORLD

Make big money spare or full time. Our easy selling plan makes experience unnecessary. We start you without money. Sample sent for 10 days trial and **GIVEN FREE** when you become a distributor.



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from your fertilizer will be greater if you use

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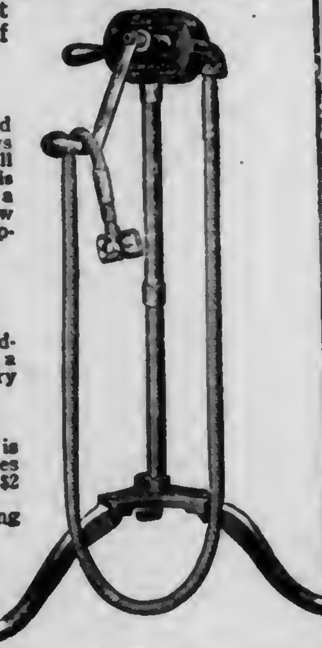
The Fertilizer that made Fish Scrap Famous

F. S. Royster Guano Co.

Baltimore, Md.



Clipped Cows Mean Clean Milk

Wide awake dairy farmers assert that it's next to impossible to obtain milk with low bacteria counts without clipping. They clip their cows on udders and flanks at frequent intervals during the winter and early spring, which makes cleaning quick and easy and keeps dirt and other filth out of the milk. Here's what two of them say:

JELKE DAIRY FARM

Dundee, Ill., Nov. 7, 1919.

A clipping machine is about the most important thing used in a dairy barn to get clean milk, as well as to keep the cows clean with much less work. **When a cow is not clipped, all the manure sticks to her hips, legs, udder and sides, and it is impossible to get sanitary milk.** No matter how careful a man may be, it is bound to get into the milk. Clipping a cow does not take much longer than to clean her well—after clipping the cleaning is a very small job.

J. P. TUCK, Manager.

BROOK HILL FARM

Genesee Depot, Wis., Nov. 6, 1919.

We find clipping our cows a necessity both from the standpoint of saving labor and of cleanliness. In maintaining a high standard of milk production clean cows are necessary **and only clipped cows can be kept clean.**

HOWARD T. GREENE, Sec'y.

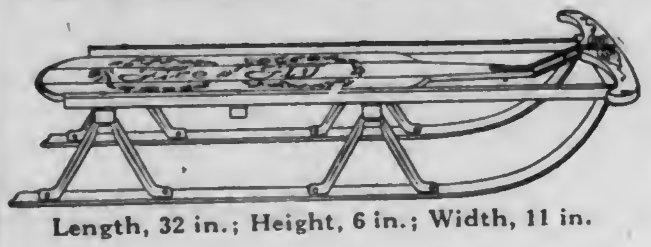
The Stewart No. 1 Clipping Machine, here illustrated, is best. Runs easily—lasts a lifetime. Clips horses and mules also. Your dealer has it, or order from us at $12.75. Send $2 if you wish and pay balance on arrival.

Electric Clipping Machine, direct current, $60; alternating current, $80.

Chicago Flexible Shaft Company

Dept. B149 Roosevelt Road and Central Ave., Chicago

A Real "Snow Mobile"



Fire Fly Coaster

Length, 32 in.; Height, 6 in.; Width, 11 in.

Send us 4 yearly subscriptions at 75 cents each and we will send you a Fire Fly coaster as a reward. Given with a single subscription and $1.50 additional.

The Fire Fly coasters have flexible spring steel runners. This enables one to guide the coaster by the steering bar, curving the runners to right or left as desired. No more wet feet from steering. Get busy at once and secure one of these sleds.

PENNSYLVANIA FARMER, 261 South Third Street, Phila., Pa.

JERSEY CATTLE CLUB STRIKES OUT SEVEN-DAY TEST

At a recent meeting of the Board of Directors of the American Jersey Cattle Club it was decided to strike out the rule that provides for the making of seven-day Jersey records of milk and butter-fat production.

Altho this rule has been included in the Test Rules of the A. J. C. C. it has been seldom used in recent years and was considered an absolete and useless form of test work from the standpoint of Jersey breeders.

While it has been argued that the seven-day test was an economical or "poor man's" test, the reverse has proved to be the case, as a good seven-day record under present-day methods requires the conditioning and drying off of a cow for months in preparation for her record. Records made under these conditions are more expensive than year's records and very few good seven-day records can be made without expensive preparation.

This action by the Board of Directors was taken without any regard to the existing clamor against seven-day tests and without any intention of injuring other breed interests. The seven-day test of Jerseys had long ago fallen into disuse and was a superfluous rule under modern Jersey testing conditions.

A new ruling admitting special qualifications of animals in the 305-day class was added and this will open the way for the making of records that will give a cow more rest between tests than the 365-day test.

SILOS INCREASING IN PENNSYLVANIA

Statistical information recently collected by the Bureau of Statistics, Pennsylvania Department of Agriculture, shows that approximately 20 per cent., or 43,657 farmers in this State are now using silos. The number one year ago was estimated at 32,900.

The wide-awake and successful farmers learned long ago that a silo, when properly used, was a valuable asset of any farm. As farm conditions improve the number of silos naturally increases.

COST OF PRODUCING MILK

For months a municipal milk survey has been conducted by the city of Rochester under the direction of Dr. Charles E. North, and this investigation of the production and distribution of milk is probably the most complete that has ever been made in any city.

In the survey it has been shown by the testimony of three expert witnesses that 141 dairy farms supplying Rochester with milk during the year ending May 1, 1919, showed a net loss of 84 cents on every 100 pounds of milk produced, or a loss of .018 cents per quart. It was shown also that the owners of these dairy farms received, on the average, only ten cents an hour for their own labor during the year.

This data collected over a period of many weeks and from the most reliable source not only shows that under present conditions the cost of milk production is greater than the price the producer has been receiving for raw milk, but that there is no way of reducing the cost of production except thro an increase in size of herds and the breeding of larger milk producing cows, or a reduction in the price of dairy feeds.

On these 141 farms, according to the evidence given, there are 2,314 cows, producing a total of 14,654,115 pounds of milk in the year. It cost to produce this milk $4.19 per 100 pounds, or an equivalent cost of nine cents per quart, while the price received for the milk during the year averaged 7.2 cents per quart. The total investment on the 141 farms in cattle is $290,841, the 2,314 cows averaging $125.69 each. The buildings used for cattle are valued at $290,058, and equipments used by the cattle, $41,956. The farm land is valued at $254,025 and the pasture land at $254,025. Eighteen per cent. of the cows produce 4,000 pounds of milk or less per year, at an average cost of 15 cents per quart, while 17 per cent of the cows produce between 8,000 and 9,000 pounds of milk a year at a cost of eight cents per quart. Twenty-four of the dairy farms investigated had fewer than ten cows each, and the cost of production was 11 cents a quart. On ten farms where more than 30 cows were kept, the cost of production was 7.5 cents per quart.

These figures contain much food for careful consideration and study. They give conclusive evidence that the 4,000-pound cow has no place on the dairy farm that produces market milk, and the quicker she is sent to the butcher's block the more money will the dairyman have in the bank at the end of the year. They also demonstrate very plainly that so far as the farm cost is concerned the consumer might as well begin now to reconcile himself to the fact that cheaper milk is a dream that will not come true under present conditions.—E. E. R.

STATE FARM PRODUCTS SHOW

The quality of Pennsylvania's Corn Crop will be seen at the Fourth Annual State Farm Products Show which will be held in Harrisburg, January 20-23, next.

There never was a time when as much interest was shown in improved corn production in Pennsylvania. It is not the prizes offered, but the interest in corn growing which attracts.

The State has been divided into five districts embracing counties where conditions are identical and where competition is on an equal basis. The sections are grouped as follows:

District No. 1: Bucks, Chester, Delaware, Lancaster, Montgomery, Philadelphia and York Counties.

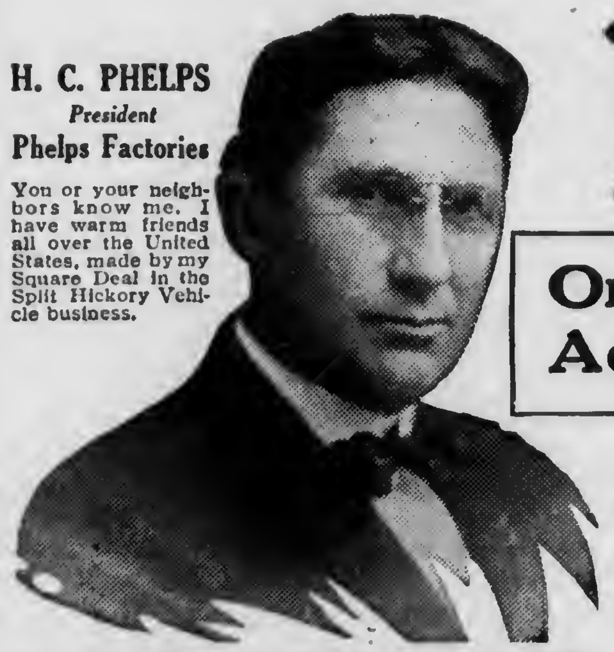
District No. 2: Adams, Berks, Cumberland, Dauphin, Franklin, Lebanon, Lehigh, Northampton and Perry Counties.

District No. 3: Armstrong, Beaver, Bedford, Blair, Butler, Cambria, Centre, Clinton, Columbia, Fulton, Huntingdon, Indiana, Juniata, Lawrence, Lycoming, Mercer, Mifflin, Montour, Northumberland, Schuylkill, Snyder, Somerset and Union Counties.

District No. 4: Bradford, Cameron, Carbon, Clarion, Clearfield, Crawford, Elk, Erie, Forest, Jefferson, Lackawanna, Luzerne, McKean, Monroe, Pike, Potter, Sullivan, Susquehanna, Tioga, Venango, Warren, Wayne and Wyoming Counties.

District No. 5: Allegheny, Fayette, Greene, Washington and Westmoreland Counties.

Another feature of this show that promotes added interest is that winners in each section are barred from participation in their respective groups for a period of three years.



H. C. PHELPS
President
Phelps Factories

You or your neighbors know me. I have warm friends all over the United States, made by my Square Deal in the Split Hickory Vehicle business.

No Money Down!

Order From This Advertisement

You can have this magnificent $150 MASTERTONE PHONOGRAPH IN YOUR HOME IN TIME FOR CHRISTMAS, WITHOUT SENDING ME ONE CENT. With the machine I'll send you a selection of fine records to play it with—no money down. You satisfy yourself before you pay ANYTHING. But you will have to send the coupon below, right away, as the Christmas rush for my royal MASTERTONE has already begun.

JUST fill out the coupon. Send no money, no pay of any kind. Back comes this big MASTERTONE with the handsomest art cabinet you ever saw—and six record selections. **If you mail the coupon this week you'll have the MASTERTONE and records before Christmas!** It will make a fine present for your wife, your children—the whole family. You use the phonograph and the records as your own for ten days. Play it for your neighbors—your friends. Take a vote of the whole family on it—and if you don't say it is as fine as any phonograph costing twice as much—if you want to part with it for any reason—I'll take the phonograph and the records back and you won't be out one cent of the purchase price.

Why I Can Make My Low Price to You

Simply because I sell my MASTERTONE to you direct from my factory. By dealing direct with me you get the benefit of all the saving of my sales method. At one small margin above the actual factory cost I put this splendid instrument in your home.

In the last twenty years I have made friends all over America by dealing *personally* with my customers on a direct, straightforward money-saving basis.

I give you a **lifetime guarantee** with my MASTERTONE because I know the workmanship is not surpassed at any price.

Your Choice of Mahogany or Walnut

You have your choice of Walnut or Mahogany satin finish, hand polished; the most beautiful art cabinet you ever saw. My MASTERTONE is built like the finest heirloom furniture. It is in the latest art style and it adds dignity to *any* room. **It** is at home among the richest furniture. When you see how much finer—how much more impressive—the MASTERTONE is than the commonplace, you will appreciate its real grace and beauty. It has a charm and distinction of appearance that harmonizes with the superior quality of its performance. It is full size—the home size agreed on by the master cabinet builders—48 inches high, 20 inches wide, 23½ inches deep. With record space for 150 records.

You Try My MASTERTONE 10 Days in Your Home

Play it with my records or any records. If you want to keep it send me only $79.50

I want you to send for it on this low price offer **now because the price must soon go up.** You know what conditions are. Labor is scarce and high. Materials are going up. I can not promise to hold my MASTERTONE down to $79.50 much longer. My present stock at that price may last ten days or a few weeks. I cannot tell. Your only assurance is to order from this advertisement *now*. It may be your last chance to get one of the world's three greatest phonographs at a clear saving of $50 to $75 cold cash.

I have letters from delighted owners of my MASTERTONE all over the country. They tell me how *perfectly* it **plays all records.** They praise its silent, velvety motor—its freedom from the grind of gears. They talk about the wonderful MASTERTONE Reproducer with genuine imported India Mica diaphragm, which gets the **exact shading** of the voices of the famous singers, and the clear, smooth liquid tones of the finest instruments. They compare it with the **other two** greatest phonographs, and they say the MASTERTONE is unequalled.

Now—try it yourself. Remember it is at **my risk.** You do not assume any obligation to keep it unless you are satisfied. Here's the coupon that brings it. Fill it out and mail it today.

H. C. Phelps, President, THE PHELPS FACTORIES
Department 103 COLUMBUS, O.

FILL OUT THIS COUPON TODAY

THE PHELPS FACTORIES, Dept. 103, Columbus, Ohio

Gentlemen: You may send me one MASTERTONE Phonograph in..............................finish (you have choice of Walnut or Satin Finish Mahogany) on your ten days' free trial offer. I agree to pay the transportation charges and if after ten days' trial I find it perfectly satisfactory in every respect, I agree to send you $79.50 in full payment within ten days from receipt of Phonograph. It is understood that this does not place me under any obligation to keep the Phonograph. If for any reason I am not satisfied with it and do not want to keep it, I agree to return it at your expense. It is understood that the Phonograph remains your property until I pay for it in full.

Name..Town..

State..St. No. or R. F. D..

Do you own property? If so give description and name of bank or any one else you desire to give as reference. Give complete description of property and name of references on separate sheet of paper.

Shall we ship by freight or express?..

NOTE: We recommend that you have Phonograph shipped by express to insure its reaching you promptly.

One of the World's Three Greatest Phonographs

PLAYS ALL RECORDS
Without Any Special Attachments

Height 48 Inches Width 20 Inches
Depth 23½ Inches

SPECIAL—Write for the MASTERTONE Portfolio whether you order or not. Your name and address on a post card will bring you full description and illustration of the phonograph in colors. I will send you **FREE** my book of Old Favorite Songs—the old-time melodies that everybody loves—50 famous songs—words and music. Write today.

How Long Would It Take On a Grindstone?

You know what a long, hard job it is to grind farm tools on a grindstone. Or how expensive it is to take them to town for sharpening.

Here's how quickly the

Luther HUMMER GRINDER

will sharpen the following tools right on your farm *without drawing the temper.*

Disc Harrows—a whole set in 2½ hours.
Mower Sickle—10 to 20 minutes.
Cultivator Shovels—10 to 20 minutes.
Plow Coulter—5 to 10 minutes.
Axe—2 to 5 minutes.
Ensilage Knife, Hedge Knife, Butcher Knife, Shears, Scythe, Corn Knife, etc.; 2 minutes.

The secret is in the wonderful DIMO-GRIT wheels of the "Hummer." They sharpen 25 times as fast as grindstones. Pedal the "Hummer" like a bicycle—no pressure required; no water or oil to cool the steel. The head swivels, making the most awkard tool easy to grind—a one-man job.

Most good hardware dealers handle the "Hummer." Ask yours next time you go to town.

Luther Grinder Mfg. Co.
The Largest Makers of Farm Repair Tools in the World.
Dept. 147, Milwaukee, Wis., U.S.A.

Send 25c, Stamps or Coin, for a DIMO-GRIT pocket hone. See for yourself how quickly it puts a keen edge on your jack-knife and kitchen knives.

For Sick Chickens

Preventive and curative of colds, roup, canker, swelled head, sore head, chicken pox, limber neck, sour crop, cholera, bowel trouble, etc. Mrs. T. A. Morley of Galien, Mich., says: "Have used Germozone 17 yrs. for chickens and could not get along without it." Geo. P. Vickerman, Rockdale, N. Y., says: "Have used Germozone 12 years; the best for bowel troubles I ever found." Frank Sluka, Chicago, Ill., writes: "I have lost but 1 pigeon and no chickens in the 3 yrs. I have been using Germozone." C. O. Petrain, Moline, Ill.: "I never had a sick chick all last season." Bernard Horsing, Kirksville, Mo., says: "Cured my punkest chicks this spring." Ralph Wurst, Erie, Pa., says: "Not a case of white diarrhoea in 3 yrs. I raise over a thousand a year." Good also for rabbits, birds, pet stock.

GERMOZONE is sold generally at drug and seed stores. Don't risk a substitute. We mail from Omaha postpaid in new 25c, 75c and $1.50 sizes. Poultry books free.

GEO. H. LEE CO., Dept. 429 OMAHA, NEB.

Pennsylvania FARMS Crawford and Erie Counties. Finest land in the country for dairy and hog raising. Good markets and voc. schools. Land $20 to $100 per acre. Send for list. Conneautville R.E.&Farm Agency, Conneautville, Pa.

LOOK BABY CHICKS $17 A 100 UP
By Special Delivery Parcel Post, postpaid 20 different thorobred breeds. Utility & Exhibition grades. Live delivery guaranteed. Capacity 100,000 weekly. Catalog free. Nabob Hatcheries, Gambier, Ohio.

SHUMAKER'S WORLD'S FAVORITE
White and Barred Plymouth Rocks and S. C. White Leghorn pullets $3 each, cockerels $4 each. Order now, satisfaction guaranteed. J. H. SHUMAKER, GLENCOE, PA.

Selby Service Satisfies Ship us your produce, poultry and eggs. Penna. Potatoes a specialty. Returns day goods are sold. Ask for our market letter.
SELBY PRODUCE CO., PHILADELPHIA

LIGHT BRAHMA COCKERELS (WOOD STRAIN). Also Barred Plymouth Rocks (Cockerel mating). A few pullets. Eggs and day-old chicks. GLEN DAY POULTRY FARM, DILLSBURG, PA., R. 2.

Barred Rock COCKERELS good strains, $3.00 to $4.00 each. J. I. HERETER, Gettysburg, Pa., R. 4.

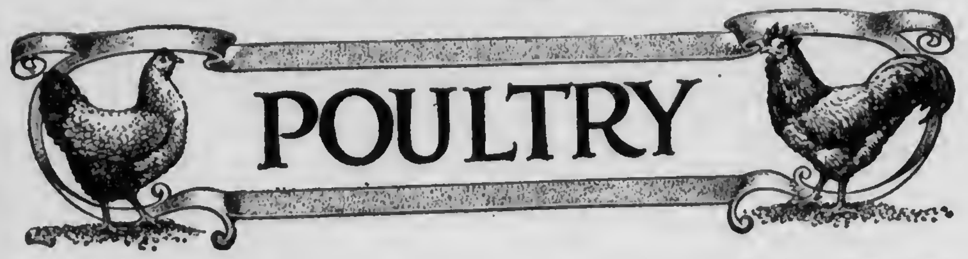
UTILITY INDIAN RUNNER DUCKS. White eggs strain, $3.50 each.
J. ELMER LONG, PALMYRA, PA.

WHITE LEGHORN LAYING PULLETS. YEARLINGS. Best strains, excellent stock, heavy layers. FOREST FARM, ROCKAWAY, N. J.

S. C. White Leghorn Baby Chicks for 1920 delivery. Tom Barron strain. Order early. C. P. Shirey, Stewartstown, Pa.

Barred Plymouth Rocks (Pullet line) Buttercups and Ancona Cockerels. Also limited supply of pullets. Prices reas. J. K. Cadwallader, Wellsville, Pa. R. 1.

TURKEYS Mammoth Bronze and half wild turkeys. Fine large stock.
JOHN D. SMITH, WALTON, N. Y.



POULTRY

SCORE CARD FOR EGG PRODUCTION

A score card for judging poultry in utility classes by their external characteristic has at last been evolved. It is one of the results of a two-weeks' conference held at the International Egg-Laying and Breeding Contest at Vineland, New Jersey, which was called together by Prof. H. R. Lewis, of the Poultry Department of the New Jersey State College and attended by leading poultrymen from Cornell, Connecticut, New Jersey, and the Ontario Agricultural College at Guelph.

One thousand yearling hens with a complete year's laying record behind them were available for study the first week and 2,000 pullets which constitute the entries for the second Vineland Contest, just opening, were on hand during the second week.

Poultry Farm of Mr. Schrope, Schuylkill Co., Pa. 2,000 Hens Average 362 Eggs Per Day

From studies made of these birds and the subsequent discussions a preliminary score card was produced, which is designed especially to give the exhibitor, when picking his birds, an idea of what the judge is going to look for in the different sections of the bird and their comparative importance. The numerical values are so worked out that the perfect bird is recognized as 100 per cent., which is to be equivalent to 300 eggs. Thus, every cut of 1 point is a cut of 3 eggs.

This is only the preliminary score card and is presented for the consideration of poultrymen only as a first step in standardizing utility judging. It is as follows:

Score Card

	Perfection	Egg Value Production
Body Type (as seen in coop or on floor).	25	75
Head and Adjuncts..	15	45
Body Conformation (as determined by handling)	30	90
Handling Quality ..	10	30
Legs and Toes	5	15
Condition	15	45
Total Perfection Score	100	300

Hints to Pultrymen, Volume 8, No. 2 on "Judging Fowls for Egg Production," by Prof. H. R. Lewis, gives a complete discussion of what makes up a good body type, head, body conformation, etc. This will soon be off the press and copies can be obtained free on request by writing to the State Agriculture College at New Brunswick.

USE OF DRY MASH

The feeding of dry mash in a hopper gives all the birds a chance to obtain the elements that are necessary for egg production. They do not obtain the right food from whole grain alone and possibly in a large flock some of the hens would not obtain enough of anything to eat. When dry mash is always before them the hen that does not gather up her share of the scratch grain still has a chance to satisfy her appetite at the mash hopper.

A beginner might think that the hen would always stay at the hopper and gorge. But the dry mash is dry and the hen cannot eat it in large quantities without taking a drink once in a while to wash it down. Watch the hens before the hopper. Most of them will take a few bites and then leave it alone for a while. And it contains a balanced ration and experiments seem to prove that a hen will not eat enough to cause injury of a mash that is properly balanced to fill her bodily requirements.

Many farmers do not use a balanced ration because they do not have the time to buy several ingredients and mix them properly. In such cases we believe that a few hundred pounds of some commercial laying mash will give the farm hens a great treat and they will be able to pay for it because of the increase in egg production and the improvement in vigor.

When a pultryman buys this commercial mash he turns over the job of properly feeding his hens to a skilled mixer of feed. Then he simply delivers the mixture to the hopper and by using other good methods with it, that poultryman is apt to succeed with his birds. Of course he must pay something for the work of having it mixed but if he has not the time for such work or the storage room for dry mash we certainly believe that it pays to occasionally buy a few hundred pounds of the commercial laying mash to help the hens thru the winter. Then the green feed and sour milk raised on the farm can be used at the same time and home grown feeds worked in to the best advantage. But the hens will always have before them a feed that is right and when the storms are severe and the weather is below zero it is a satisfaction to tho farmer to know that the hopper contains enough balanced food to keep the hens healthy and doing their best.

As a farmer I believe in raising all the feed possible and all of it, if possible. It saves a lot of money. But there are farmers who need most of the home grown feed for the cattle and horses and when they own a good flock of hens it pays to feed them right even if commercially mixed feed must be purchased. At least it is better to feed hens well and use a dry mash and have the hens pay for it than to feed only the scratch grain and throw it out in large quantities all winter long and yet receive scarcely an egg to pay for that grain.—Kirby.

LIGHT AND EGG PRODUCTION

Some poultrymen claim to have increased egg production in the winter by the use of artifical light in the laying houses. If electric lights are not available there are oil lights manufactured which are strong enough for that purpose. The lights are started before the sun is up in the morning so that the birds can start scratching, and then they are allowed to burn for about an hour in the evening to prolong the day. Now that the days are becoming the shortest of the year it may be profitable for some poultrymen to try lighting the houses. A gallon of kerosene will keep the lamps going quite a few hours in an ordinary poultry house. Some of the experiment stations have found the lighting of the houses pays and it remains for the farmer to find out if the number of eggs gained is worth the trouble of managing the lights.

STUDY THE COCKERELS

In selecting cockerels for the farm flock next year, place a great deal of emphasis on vigor. This will help to insure good hatching eggs. Vigor in a cockerel is denoted by early feathering, a bright red head, a large frame, good appetite and a pugnacious disposition. With a little experience and study it is possible to cull out the broiler stock from a flock of cockerels and save the best for breeders.

When the flock is bred for egg production it pays to know the hens that the cockerels come from. If a few of the high egg-producing hens can be penned separately and the good cockerels saved from their eggs it will help much in improving the quality of the flock.

It is bad management to develop a good laying flock and then carelessly select the cockerels for the breeding operations. In one year much of the good accomplished by years of careful work can be undone. When selecting cockerels to breed fancy stock always try to conform as nearly as possible to the standard. This means that the breeder must know what points need improving. He must be familiar with the breed type of an ideal bird and strive to attain as much of that quality as possible. Most poultrymen could invest a few dollars to good advantage by visiting the yards or farm of an experienced breeder of the same kind of stock. It is surprising how much information can be picked up on such a trip. It is the type of knowledge that is most

easily remembered. A careful study of the cockerels each year is one of the quickest methods of improving poultry flocks with the least effort.

NESTS AND NESTING MATERIAL

Many elaborate plans are given for the construction of hens' nests. No doubt nests neatly arranged in tiers and rows will give the house a showy look; but so long as lice and mites insist on living in the hen house, just plain ordinary boxes are hard to beat as nests. It certainly is an uphill job to keep a fancy battery of nests free from lice. Spraying may get the mosts of the pests, but a job of spraying is never so thoroly done but that a few of the vermin will survive to increase and reinfest the nests.

The boxes can be thoroly cleared of the pests. My method of doing this is as follows. The nests are taken outside the building. A small fire of straw or chaff is started, and the boxes, one at a time, held over the blaze until they are near charring. When put thru a cleaning process like this, the nests have certainly been entirely freed from the pests.

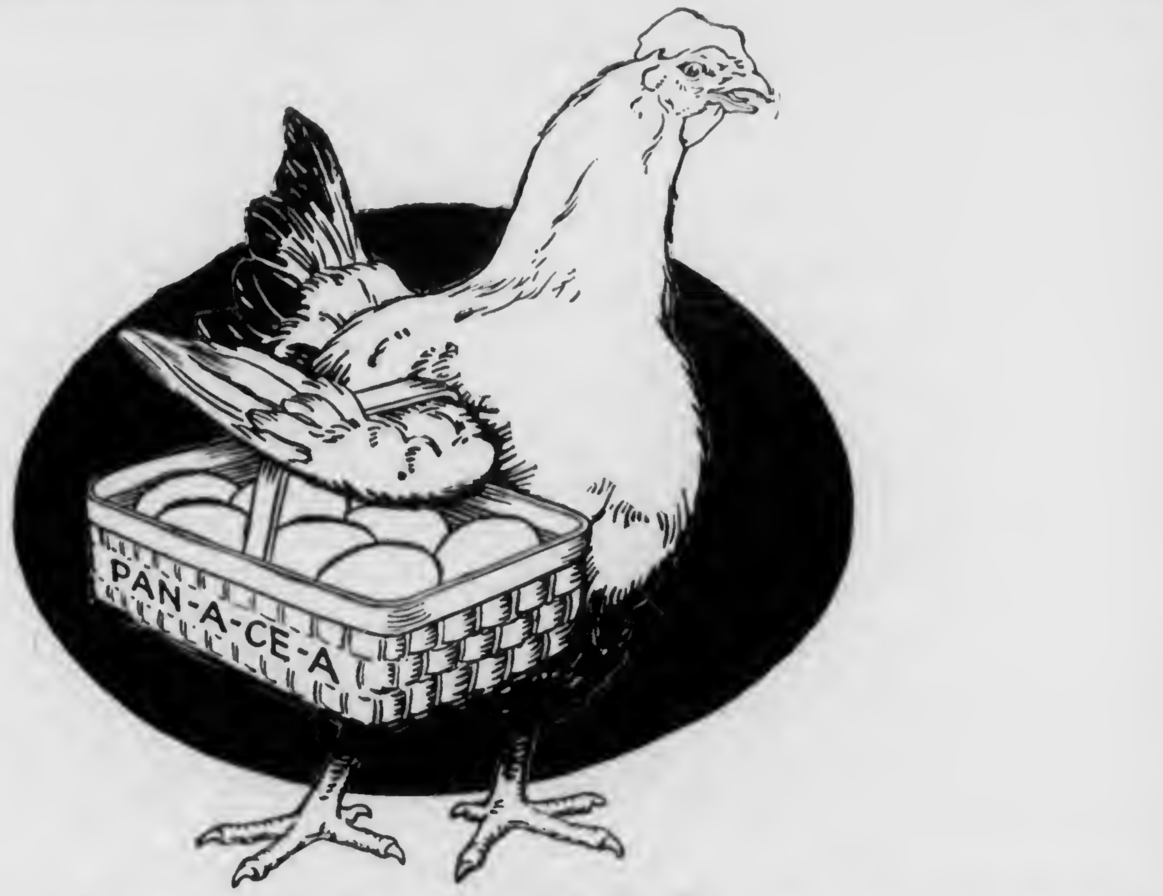
Straw is more generally used as nesting material than anything else. From a sanitary viewpoint, straw makes a poor nesting material, for the reason that the hollow stems make ideal hiding and breeding places for mites. Hay and excelsior are better. An almost louse-proof nest can be made of tobacco stems covered with an inch layer of hay or excelsior. Lice and mites can not stand the odor of tobacco.

PROTECTING HENS' NESTS

Too often the hen's nests are built solidly in the hen house. Often they are made of scrap lumber which furnishes hundred of cracks and crevices where dust can accumulate and mites and lice breed. Rather than build nests of that type it is better to use small store boxes or orange crates. Holes can be bored in the sides of the boxes and nails placed in the sides of the hen house. Then the nests can be hung there and when it is necessary to clean them they can be removed and sunned and sprayed. Such nests will be enjoyed by the hens more than an elaborate nesting system which is sort of a louse hotel.

Tobacco stems make a fine nesting material as they drive away mites and lice. Twisted hay does not break up easily. Pack it in the corners of the boxes and make a thick cushion in the middle. This will not easily be scratched out by the hens. Make the nests large enough for one hen but not large enough for two. This prevents fighting in the nests which often results in broken eggs.

When large nesting systems are built along the walls it pays to have the entrance at the back on a small track. The hens think they are hiding their eggs and like such nests. But even then have the sections small enough so they can be unhooked and taken out of the poultry house for cleaning. If they are nailed tightly they soon become dusty and pest infested and the finest nesting system will not be as satisfactory as a few kegs or boxes. In building our first poultry houses we made the nests of scrap lumber and nailed them securely to the wall. They have all been torn out and it is now easier to clean and spray the houses as the nests are all in portable sections.— R. G. K.



It's not fat—it's EGGS you want

Are your hens just boarders? Fat and lazy? All their food going to flesh? Nothing left for egg production? Madam,—Your hens' egg organs are dormant, and if you are going to be satisfied to let nature bide its own time to revive these dormant egg organs, it will be Spring eggs, not Winter eggs, for you. But why wait on nature?

You can speed up egg production—you can make your hens lay now by feeding

Dr. Hess Poultry Pan-a-ce-a

It contains *Nux Vomica* and *Quassia*, the best nerve, appetizing and digestive tonics known to the *Materia Medica*—tonics that promote a hen's digestion—tonics that tone up the dormant egg organs so that the proper amount of food goes to egg production, and not all to flesh, and fat, and laziness, when it's action, and eggs you want.

Pan-a-ce-a supplies the additional iron for the blood, which is essential to the speeding up process. It contains certain forms of lime that supply the needed material for making egg shells.

Dr. Hess Poultry Pan-a-ce-a insures a healthy, singing, laying, paying poultry flock, Winter as well as Summer.

Always buy Pan-a-ce-a according to the size of your flock. Get it from a reliable dealer in your own town. Tell him how many fowls you have, and he will supply you with the proper sized package, which is guaranteed. 30c, 75c and $1.50 packages. 25-lb. pail, $3.00; 100-lb. drum, $10.00. Except in the far West and Canada.

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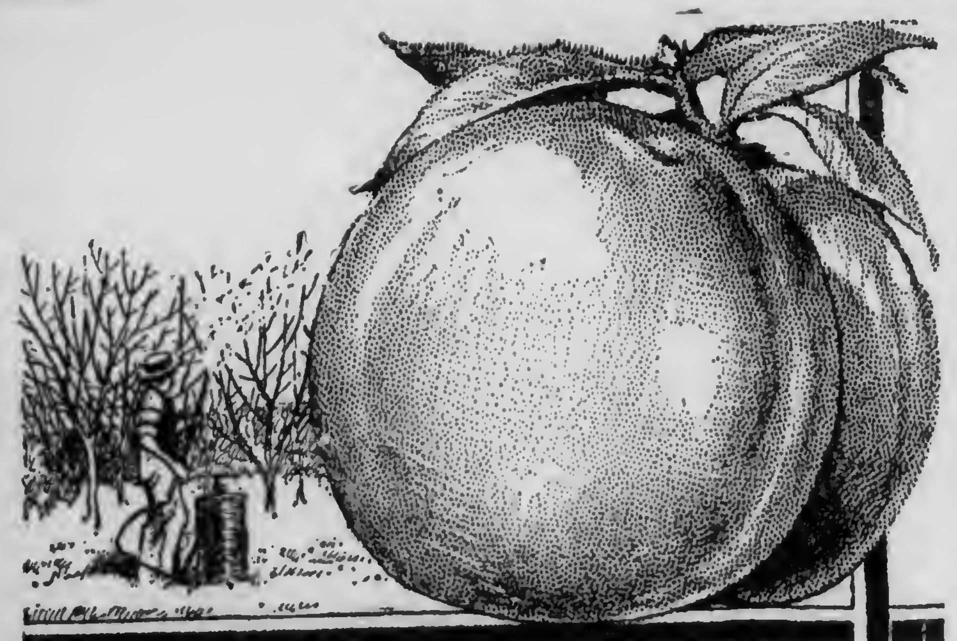


It's Time to Spray

Trees are sleeping, but the scales are not sleeping. Dormant spraying is the first step in the season's spray schedule. Let us advise and direct you. Write and we will send you an excellent spraying book and tell you why you should use

Orchard Brand B.T.S.

for San Jose Scale and Peach Leaf Curl—a great scale remedy—the result of over 20 years' experience. You will prefer this dry product to any solution you can buy because the bulk is less, weight less, shipping charges less, no leakage and altogether more economical and satisfactory. Simply add water in the orchard—then it's ready.

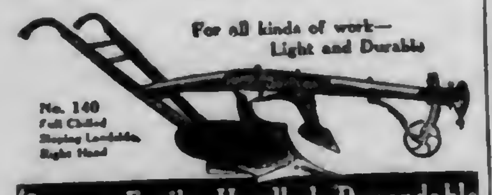
A 100-lb. keg of B. T. S. is the equivalent in all spraying operations of a 50-gallon barrel of Lime Sulphur Solution weighing 600-lbs. For dormant spraying begin shortly after leaves fall—spray any time weather is suitable until shortly before buds open in spring. We gladly answer any questions personally.

Orchard Brand Spray Materials

include also the standard Orchard Brand Lime Sulphur Solution and a complete line of Insecticides and Fungicides for Dormant and Growing period spraying.

We are cooperating with fruit growers everywhere. Put your problems up to us. Write us direct. Get your name on our mailing list to receive seasonable spraying information. Address as below.

General Chemical Co.
Insecticide Dept., 25 Broad St., New York



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LESSONS FROM THE SEASON OF 1919—II.

I am wondering if many of the readers of Pennsylvania Farmer have had unsatisfactory results from the use of commercial fertilizers this past season. They will recall that I have always been an advocate of home mixing of fertilizers. I am well aware that I do not voice the sentiment of a majority of my fellow farmers, nevertheless I am more pronounced in my convictions today than ever before, and my reasons follow:

For the last two seasons it was very hard, if not altogether impossible, for any one to purchase raw materials at a price at which home mixing could be done advantageously. The writer tried very hard to continue along the line of home mixing thru this period but ran against so many obstacles that I yielded to arguments and used commercially mixed goods, mainly because I was forced to. In doing this I took the agency for my locality not to sell fertilizers at a profit to my fellow farmers, but to secure goods for my own use, and those members of our local Grange who desired to buy for cash, and to obtain them at agent's prices in car load lots. Furthermore, we desired some of our goods should contain some potash, an ingredient that was absolutely impossible for us to purchase other than in mixed goods. I was told that I was dealing with the largest and most reliable fertilizer manufacturing concern in the U. S. We purchased for cash. As I said in a previous article I bought liberally and paid high prices with the conviction that it would pay this season to be liberal in the use of plant-food.

When some of my earliest crops were up and should have been growing and a good, thrifty color, I noticed that this was not the case; instead the young plants were not thrifty, but looked starved for soluable nitrates.

I immediately had a suspicion that all was not right with that fertilizer. I sent for an official sampler at New Brunswick, who came promptly, and upon analysis it was found that both brands of this fertilizer were low in ammonia content, below the guarantee; and what ammonia was there was of a very poor and insoluable nature. Only a fraction of one per cent was derived from sulphate of ammonia, while the balance was from some insoluble form of organic matter. By the time this was discovered nearly, or quite, all crops had been planted and fertilizer used.

However, in the meantime I had commenced, so far as I could, to repair damages. I purchased additional acid phosphate, because that too appeared to be lacking. I took 1500 to 1600 pounds of nitrate soda with it and side dressed all my crops. Almost immediately I began to see results, but every truck or market garden farmer knows full well what he must pay for lack of earliness, and also vigor, in the plant. The vigor in the plant could be brought back, and was by this liberal feeding for a time, but by the time this was partially accomplished the rainy season was upon us, and one deluge upon another prevented the late use of fertilizers from producing much benefit.

Had the first application of fertilizer contained soluable plant food the crops would have been much more forward by the time the excessively wet weather was upon us.

It is a well-known fact too, that many of our vegetable crops are not producing a maximum yield because of the lack of available potash. Fabulous prices were paid for goods containing 2 to 4 percent of available potash and applied to those crops that most need it. Now we are told that much of our American potash contained borax, a substance that is poisonous to the roots of plants. Had I adhered to a policy of over 20 years standing, that is of buying raw materials and compounding them on the farm my foresight would have been better.

I do not wish to infer by what I have here stated is true in all cases where farmers purchase ready mixed goods, but I do want to emphasize this: When a farmer purchases fertilzer ingredients and compounds them at home he knows what he is getting, and that is worth many times more than it costs.—C. C. Hulsart.

A Profitable Crop

REPLANTING RHUBARB

Last spring we set out a new field of rhubarb. For some reason or other many hills are missing. Perhaps it was because the roots were divided into very small pieces but I am inclined to believe that the roots were not set quite so deeply as they should have been, however, the fact remains that the vacant spaces would cause a loss during the next three or four years. Therefore, it is my intention to reset the missing hills this fall, while the vacant places can be seen. We will go to the old field, plow out a few rows of roots and divide them into 3 or 4 instead of into 8 to 10 pieces. Then if these large pieces of roots are set into the vacant spaces by shoveling out deep holes with a spade, the newly set hills should make a fine growth next spring.—R. W. DeBaun.

Cottage cheese is not only a home dish but a commercial article as well. Properly packed, it can be shipped considerable distances by parcel post.

Successful Farmers Operate SELDEN Trucks

Labor is scarce and high-priced and seasons uncertain. Critical conditions must be met often within a few days or even a few hours. The possession of sturdy, absolutely reliable Selden Motor Trucks may often mean a profit instead of a loss to you.

Farmers who have equipped with Selden "In-Built Quality" Motor Trucks feel a justifiable security. They have found in these giant work horses the equivalent of men who can be depended upon to accomplish extraordinary feats of endurance. At harvest and shipping time they know they can get 24 hours of swift, economical service out of Selden Trucks, if necessary.

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To get your crop to the packing house or to the shipping point quickly and with the minimum of injury—for hauling livestock with the least possible shrinkage—for any kind of hauling work on the farm or transportation between farm and city SELDEN TRUCKS have no superior.

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Selden Motor Trucks

FIVE-POUND CANDY FROM TWO-POUND SUGAR

I think you can do it—make five pounds of good candy for Christmas from two pounds of sugar; indeed I'm sure that you can, for I have done it myself.

Cocoanut and Condensed Milk Candy

First, I'll tell you how cocqanut and condensed milk can be made into a delectable sweet. Just stir ½ lb. cocoanut up with as much condensed or evaporated milk as will make it stick together—the condensed milk is the stickiest and also the sweetest, but I have made this confection very satisfactory with the evaporated milk. When the cocoanut and milk have been blended together thoroly, put heaping teaspoons of it on a greased agate pie plate, and bake in a moderate oven until a golden brown.

Stuffed Prunes

Steam a pound of prunes until they are tender but not soft; take out the stones, and fill the cavities with peanut butter. Thus you will have a candy that is quite nutritious as well as delicious. You can make them still more delicious and pleasing to the young folks by rolling them in powdered sugar, if you have enough of it. It takes only a little, however, for this additional sweetness.

Carrot and Fruit Center Candy

Carrot makes a good center for candies. Cook the carrots tender, cut them into slices half an inch thick, and boil them in white corn syrup until they look almost transparent. Then dry them on a screen, and mold around them a fondant made thus: To 1½ tablespconfuls mashed sweet or white potatoes add as much confectioner's sugar as will make a smooth paste. Flavor the fondant with any flavor liked, and color it, if desired, with a tiny drop of any of the vegetable colorings made for this purpose. Then use the carrot slices as centers for fondant molded around them. Apple cut into eighths, raisins, nuts and malaga grapes also make delicious fillings. Roll some of these candies in shredded cocoanut to make variety.

Potato Chocolate Creams

You will never believe until you try it how delicious potato fondant can make chocolate creams. Sweet potato makes a cream-colered fondant, and white potato makes as perfect a white fondant as was ever used in store chocolate creams at $1.50 a pound. Flavor and color mold the centers as desired, let stand an hour or so, than dip into melted unsweetened chocolate. I usually add a little paraffin to the chocolate to make it stay firm; 1 teaspoonful of paraffin to half a cake of the chocolate is about right. More will make the chocolate coating harder and shinier than you may like to have it. About three tablespoonfuls of mashed potato per 1 lb. confectioners' sugar will answer.

Nut and Raisin Chocolates

Raisins and chopped nuts mixed make a good center for chocolate shells made as directed above.

Sea Foam Candy

To 1½ cups brown sugar add 1 tablespoon vinegar and enough hot water to melt the sugar. Boil without stirring until it will make a hard ball (but not brittle) in cold water. Have ready an egg white beaten very stiff, and add the hot syrup to this, beating constantly and adding vanilla flavoring and nut meats, if desired; beat until the mixture will set stiff in ragged little sea foam lumps when dropped on a buttered plate. Drop them with a teaspoon. If you do not boil the syrup enough, the sea foam will not be foamy looking; and if you boil it to long it will be sugary, so try to get it just right.

Since moisture will sometimes keep candy from hardening as it should, one usually has better success if the candy is made on a dry sunshiny day; however, this does not matter so much when we have the house warm with dry heat.—Mrs. Nina Wallace, Broome Co., N. Y.

THE BEST TOYS

Five Christmases of buying and receiving gifts of toys for three little ones have taught me a few things about the relative value of toys. We have no nursery and only one living-room, hence the children, when indoors, must play around the house, and I must walk over scattered toys when they are having the very best time. Therefore, first for the children's own good, and then for my own, I prefer good stout toys. The kiddies car in all its variations is the very best toy I have found, both for indoors and out. When treated like a horse with a "barn" to stand in, it is out of the way. To be sure, it is not always in the "barn," but having a "barn' is excellent training for keeping things in their places

I have found the tin wagons better for the little folks, as they pull easier. The coaster wagon is better for larger children. With a team of kiddies cars, a few odd pieces of harness well equipped with rings and easy snaps, and a wagon, our children drive imaginary miles on all the trips daddy makes. If the kiddie cars have horses' heads, so much the more real the outfit. Then there are the bicycle and tricycle. A toy auto is rather unsatisfactory unless an expensive ball-bearing model is chosen, and this is too high-priced for the ordinary pocketbook. While I believe in giving the children all the pleasure possible, still I do not think the original purpose of a toy should be lost sight of, and when an extravagant toy is purchased the child gets a lesson in extravagance.

Blocks of various shapes and sizes are always popular with the children, for they can be used in a variety of ways.

It seems to me that one well-kept dolly is better than several half-dressed dilapidated creatures. Really the value of the doll aside from the pleasure given the little girl lies in teaching her to take care of it, and to make and care for its wardrobe.

As for the play-house toys, many are flimsy, and unless there is a nursery only a few of the best should be chosen. The tea party is always a great joy, so a stout low table and chairs with some dishes, a pan and dish cloths and dish drying cloths, will be valuable, because the dishes can be cleared up and put away, which is half the pleasure.

I found most mechanical toys short-lived. Tin toys are an abomination to me, because they are always breaking and have sharp edges. Our children do not usually like to play with them more than long enough to scatter them, and then there is trouble getting them put back.

For rest time there are books. I have found that one or two good books that are respected are better than a dozen halfkept ones which are rarely looked at. Then there are the kindergarten wooden beads, sewing cards, etc. Some of these require rather more direction than the mother has time for, but some can be directed from the ironing board or cook stove. At any rate all toys work better with a few suggestions from mother.

We must not forget toys for the baby. I don't believe my oldest boy ever shook a rattlebox two minutes, tho he had them by dozens, and rubber toys. A baby will enjoy anything just so it is new and something to handle. A spoon, a clothespin, two spools firmly put on a pencil, anything washable will answer as well as a raft of boughten toys. In these days when stockings and shoes cost to much we haven't so much to spend on the children, hence tho the toy stores are a veritable fairyland of temptation (I sometimes think more so to the parent than to the child), we must buy carefully and wisely. And even if you do buy store toys, it will often happen that when somebody you would like to impress well comes to call, you are quite apt to find the front porch littered with old boards and boxes and remnants of barn trash and the children giving evidence of having a lovely time. Mrs. Chester Lee.

CONTENTMENT IN THE GARDEN

We know a retired farmer and business man who has kept young until he is eighty-four years of age by turning to gardening. He does not neglect his weighty affairs, yet he has a small fruit plantation and a garden that are the wonder of his community for miles around. Therein he takes such joy that while he could live, if he chose, in the city, yet he stays nearly always on his farm and helps things grow in his bit of sheltered gardenland. How many other old men on the farm have neglected to claim the opportunity for happiness that was within so short a distance from them. It is the taking hold of such opportunities that has kept so many old men young until the end of life.

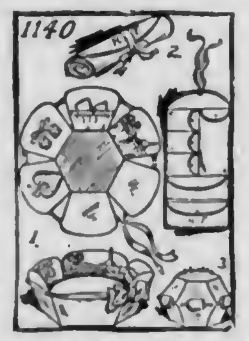
Gardening holds intense interest for many old people on the farm. A good garden is a source of delight and joy. There, they are in the saddle, yet may take time for life and pleasure in living. Especially is this true when the aged gardener specializes, where he has a hobby. It is interesting, for instance, to go to the telephone and call up a neighbor and say, "We are going to have new potatoes and green peas for dinner today." Naturally the potatoes and peas are watched and there is joy and life in trying to outdo the neighbors and young folks on the farm. Truly, the old man who seeks to find contentment thru working among fruits and vegetables not only makes himself more happy and contented, but enriches the lives of those about him.

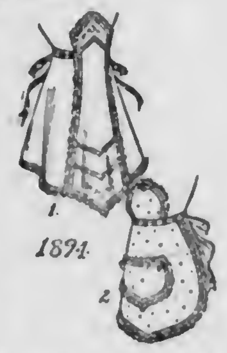
PENNSYLVANIA FARMER PATTERNS

Give figures and letters of each pattern exactly as printed at beginning of each description or we will not be responsible for correct filling of orders. Give bust measure when ordering waist patterns, waist measure for skirt, and age for children's patterns. Address Pennsylvania Farmer, 261 S. Third Street, Philadelphia, Pa.

ACCEPTABLE CHRISTMAS PRESENTS FOR MOTHER OR SISTER

1140.—This combination includes a work basket, a utility case, and a pin box and spool holder combined. The latter could also be developed as a button box. The work basket is good for cretonne, silk, linen or denim. The utility case may be made of cretonne, linen, denim or crash, but is best rubber lined, or made of rubberized materials. The spool holder may be of a silk, canvas, denim, cretonne or crash. A good suggestion for the work basket, is to make it of tan linen, embroidered in red, with lining of red satin or sateen. Cretonne in lovely pink and green tones would also make this a servicable article. The basket sections could also be woven of raffia over a cardboard foundation, and lined with silk. For the pin box the same materials would serve that could be used for the work box. For the utility case there are lovely rubberized silks, and cretonnes. It requires 1⅛-yard of 36-inch material for No. 1; 1¼-yard of 27-inch material for No. 2; and ⅞ yard of 24-inch material for No. 3. Pattern includes all and cost 10c.

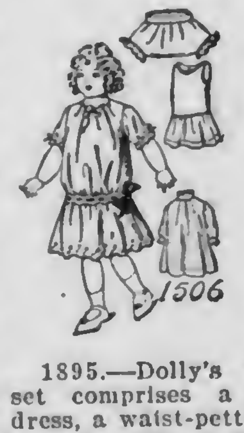


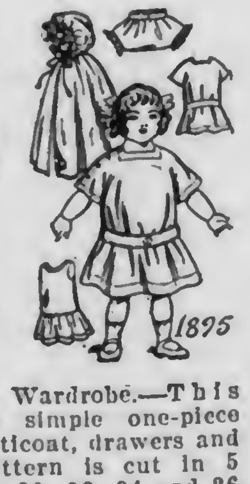


1894.—Ladies' Aprons.—These styles are nice for lawn, batiste, wash silk or crepe. No. 1 is made with a panel cut with a pretty bib section. No. 2 is in one piece, with an ample pocket and daintly bib portion. These aprons are cut in one-size only. It will require ⅞ yard of 36-inch material for No. 1 and 1¼ yard for No.2. Pattern,10c.

DOLL CLOTHES FOR CHRISTMAS

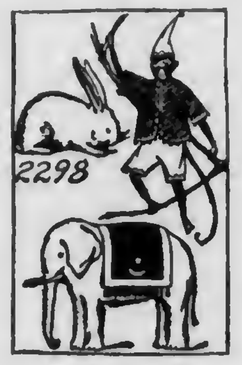
1506.—Set of Short Clothes.—Comprising drawers, underskirt, and a dress that may be finished in bishop or French style. The pattern is cut in 6 sizes for dolls 14, 16, 18, 20, 22 and 24 inches tall. It will require ⅝ yard for the drawers, ⅞ yard for the petticoat, and 1 yard for the dress, of 36-inch material for a 24-inch doll. Pattern costs 10c. This pattern also comes in child's sizes: 1, 2, 3 and 4 years; price, 10 cents.

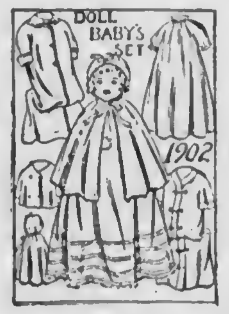




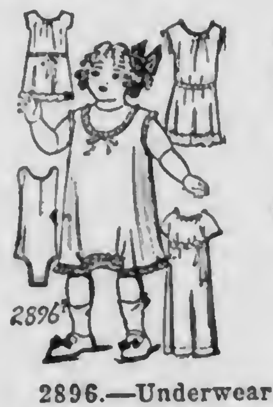
1895.—Dolly's Wardrobe.—This set comprises a simple one-piece dress, a waist-petticoat, drawers and a cape. The pattern is cut in 5 sizes for dolls 18, 20, 22, 24 and 26 inches in length. The dress requires ¾ yard, the drawers ½, yard, the cape ¾ yard of 36-inch material for a 22-inch size. Pattern, 10c.

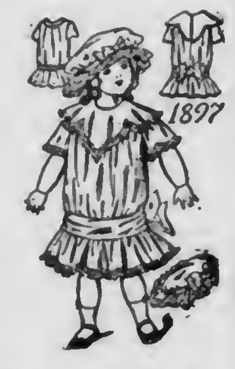
2298.—Stuffed Menagerie.— This set comprises a monkey, a rabbit and an elephant. Developed in flannel, or flannelette, and stuffed with cotton, down or saw-dust, these animals are the delight of little children. The patterns are cut in one size only. It will require one yard of brown flannel for the monkey and ½ yard of red flannel for his suit. The elephant requires one yard. The rabbit ½ yard. Pattern, 10c.





1902.—Baby Doll's Long Clothes Set.—There is no doll so dear to the heart of a doll's mother as one dressed in baby clothes. The designs here shown are easy to make, as they are cut on simple, one-piece lines. The pattern is cut in 3 sizes for dolls 16, 18 and 20 inches tall. It will require 2⅛ yards of 27-inch material for the dress, 1⅞ yard of 24-inch material for the wrapper, and 2⅛ yads of 24-inch material for the coat, for an 18-inch doll. Pattern, 10c.



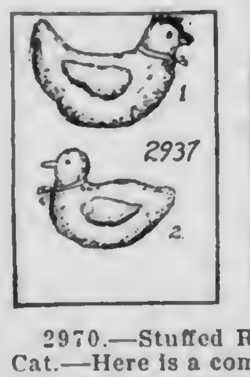


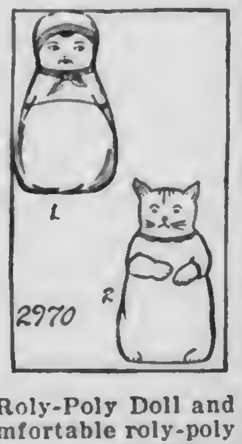
2896.—Underwear for Dolly.—These models comprise envelope chemise, a petticoat with waist, and a night dress that may be finished in Empire style. The pattern comprises all styles illustrated, and is cut in 6 sizes: for dolls 14, 16, 18, 20, 22 and 24 inches tall. It will require 2 yards of 36-inch material for a doll 24 inches long, for the entire set. Pattern, 10c.

1897.—Pretty Set for Miss Dolly. This comprises a smart dress for party or general wear, according to the material selected, and a pretty hat in Tam style. The dress is made with yoke sections, and the bertha may be omitted. The pattern is cut in 5 sizes: for dolls 18, 20, 22, 24 and 26 inches tall. The dress will require 1½ yard of 36-inch material the hat, ¾ yard for a 22-inch size. Pattern, 10c.

STUFFED TOYS FOR BABIES' CHRISTMAS

2937.—Stuffed Chick and Duckling. One may make these toys of toweling, terry cloth, or elderdown. The filling may be of sawdust, cotton batting, paper snips, cork or other substance that will make the toy float. The Pattern is in one size. It will require ⅝ yard of 24-inch material for either toy. Pattern, 10c.





2970.—Stuffed Roly-Poly Doll and Cat.—Here is a comfortable roly-poly doll and a cunning cat. Toweling stuffed with cork would make these models floating toys. Plush, felt, flannel, outing flannel, drill or crash may also be used. The doll could be made of different material below the arms. The pattern is cut in one size. Either style requires ¾ yard of 27-inch material. Pattern, 10c.

More Than a Washing Machine

The Maytag Multi-Motor not only disposes of the family washing quickly, but in addition it is a general household and workshop power plant.

Churning, running the Cream Separator and Grind Stone, are only some of the purposes to which it may be put, and its unusual performance marks the Multi-Motor Washer a distinguished member of the Maytag family of home laundry utilities.

Ask your dealer to demonstrate this remarkable labor-saving utility in your own home.

The Maytag Household Manual, a book of helpful suggestions in home economy, sent without charge on request.

THE MAYTAG COMPANY
Dept. 576 NEWTON, IOWA

BRANCHES
Philadelphia, Kansas City, Indianapolis, Atlanta, Portland (Oregon) Minneapolis Winnipeg

DISTRIBUTORS 75
BALTIMORE, MD.—King Electric Washing Machine Company.
BILLINGS, MONT.—Billings Hardware Co.
BOISE, IDAHO—Stewart Wholesale Co.
CHICAGO—The Fair
HELENA, MONT.—A. M. Holter Hardware Co.
NEWARK, N. J.—Newark Electrical Supply Co.
OAKLAND, CALIF.—Creighton-Morris Co.
SALT LAKE CITY—Utah Power & Light Co.
SAN ANTONIO—Smith Bros. Hdwe. Sales Co.
SEATTLE—Seattle Hardware Co.
SPOKANE—Holley-Mason Hardware Co.
FOR UTAH AND IDAHO—Consolidated Wagon & Machine Co., Salt Lake City.

LET US TAN YOUR HIDE.

Horse or Cow hide, Calf or other skins with hair or fur on, and make them into coats (for men and women), robes, rugs or gloves when so ordered. Your fur goods will cost you less than to buy them and be worth more.

Our illustrated catalog gives a lot of information. It tells how to take off and care for hides; how and when we pay the freight both ways; about our safe dyeing process on cow and horse hide, calf and other skins; about the fur goods and game trophies we sell, taxidermy, etc.

Then we have recently got out another we call our Fashion book, wholly devoted to fashion plates of muffs, neckwear and other fine fur garments, with prices; also fur garments remodeled and repaired.

You can have either book by sending your correct address naming which, or both books if you need both. Address

The Crosby Frisian Fur Company,
571 Lyell Ave., Rochester, N. Y.

LIGHT YOUR HOME LIKE DAY—Cost 1c for 6 hours. Pure white 60 candle power light from common Kerosene.

SOLAR MANTLE LAMP approved by government experts Beats gas, gasoline or electricity. Entirely new Every home interested. AGENTS MAKE MONEY. Weeks free trial Write quick selling plan, territory and trial offer.

SOLAR LAMP CO., F44 Solar Bldg., Kansas City, Mo.

UNDER WHAT LUCKY STAR WAS YOUR BABY OR YOUR FRIEND'S BABY BORN?

What do the ancient astrologers predict concerning Baby's future disposition and personality? ROGERS BABY ZODIASCOPE, engraved with Baby's name; beautifully hand painted and embossed; framed in mahogany and crystal glass; size 5 x 6, shows the prediction of ancient astrologers according to Zodiacal Constellation under which baby was born. Designed for babies up to 4 years old. State Baby's full name, age, exact date of birth and shipping address and enclose purchase price when ordering. Price $1, parcel post free. Card giving complete description free on request.
JOHN L. ROGERS, Dept. B 1011 Chestnut Street, Phila.

Famous Restaurant Combination
COFFEE
FROM WHOLESALER DIRECT
In 5-lbs. Lots or Over Delivered Free within 3rd zone (300 miles) 4th zone 37c lb.—5th zone 39c lb.—6th zone 41c lb.—7th zone 43c lb.—8th zone 45c. lb.
35 c. lb. Ground Only.
We're accepting orders from families direct for this remarkable blend, used by leading N. Y. restaurants
Satisfaction Guaranteed or Money Back
Gillies Coffee Co., 233-239 Washington St., N. Y.
Established 79 Years

PIPE second hand. Large stock all sizes furnished with new threads & couplings. Prompt shipment. J F Griffith, 416 Moyer St., Phila

10 Cents WORTH OF COMMON ORDINARY KEROSENE or Coal Oil will keep this lamp in operation for 50 HOURS and will produce 300 CANDLE POWER of the purest, whitest and best light known to science. Nothing to wear out or get out of order. Simple. Safe. Absolute satisfaction guaranteed. Send for catalog showing lamps for every purpose; also special introductory offer and agency proposition. Write today.

No Wicks to Trim
No Smoke
No Smell

KNIGHT LIGHT & SODA FOUNTAIN COMPANY, 127 Knight Bldg. Chicago

HOOSIER STOVES & RANGES FREE

To try in your home 30 days free no matter where you live. Show your friends, send it back at our expense if you do not want to keep it. Million members of families enjoying the comforts and pleasures of "Hoosier" Stoves & Ranges, perfect bakers and heaters, beautifully finished, smooth latest design, guaranteed for years.

Write for our big free book showing photographs, describing large assortment of sizes and designs of Steel and Cast Ranges, Cooks, Soft and Hard Coal Heaters, to select from, explaining our free trial. Send postal today.

HOOSIER STOVE CO.
132 State St., Marion, Ind.

GALLOWAY'S SPECIAL
30 DAY OFFER
Direct from Factory
Masterpiece 7
ENGINES

Here is your chance. Buy one of the famous Galloway Farm Engines or Spreaders at a special low price. Get in on this 30-day offer. Save money. When old winter freezes, snows and blows, there are many jobs that a Galloway Engine will relieve you of and it works in any weather. Built for long and hard service. Gives 7 actual horsepower for the price of 6. Portable or stationary. Big bore, long stroke, heavyweight, every part standardized and interchangeable. With a Galloway "frostproof" Engine this winter, you'll do your work in less time and with less effort than ever before.

SPREADERS

Note these low factory prices below—they cannot be matched anywhere. Fine quality spreaders never sold for such a low figure before and never will again.

With Whirlwind Distributor

The Galloway new whirlwind distributor absolutely pulverizes every bit of manure and scatters it six to seven feet, saving time and labor in spreading. Remember that Galloway has 11 other great features that enable the Galloway Spreader to spread more land with less effort—less horse and man power—than any other method known.

Factory Prices
$154.75 For the New No. 8
$147.25 For the New No. 5
$139.75 For the New No. 1A

Write Galloway Now

Don't let this 30-day low price opportunity slip by. Get your order in early. Have your engine for Winter work and your Spreader now for immediate or next Spring's work and save big money on both. Write today and get the full facts with complete descriptions of these bargain price, quality implements. Near by shipping points save you on the freight. Write NOW!

WM. GALLOWAY, Pres.
Wm. Galloway Co.
197 Galloway Station
WATERLOO, IOWA

Beat the Fuel Shortage

As low as $10

Don't depend on coal these days. Install a Hertzler & Zook Portable Wood SAW and be sure of your fuel supply. Easy to operate. Our No. 1 is the cheapest and best saw made to which a ripping table can be attached. Guaranteed for 1 year. Money refunded if not satisfactory. Write for catalog.

No. 5

HERTZLER & ZOOK CO., Box 29, Belleville, Pa.

KEROSENE ENGINES
OTTAWA LATEST DESIGN

Durable, Powerful, Reliable, Massive. Built to last; to do hard; heavy work. Uses Cheapest Fuel. Pull ¼ to ½ horse-power more than rated. 3 Months Trial. Easy Terms. Sizes 1½ to 22 H-P. Easy to start. No cranking. No batteries. 10 Year Guarantee. Most practical engine ever built. Engine book free. A Postal brings it.

THE OTTAWA MANUFACTURING CO.
1901 King Street, OTTAWA, KANSAS.

9 CORDS IN 10 HOURS
RUNS EASY No Backache
weighs only 45 lbs.
EASILY CARRIED
SAWS DOWN TREES

BY ONE MAN. It's KING OF THE WOODS. Saves money and backache. Send for FREE catalog No. B 108 showing low price and latest improvements. First order gets agency.
Folding Sawing Machine Co., 161 West Harrison St., Chicago, Ill.

The Story of an Armenian Girl

Showing the Need of Charity Without Stint; Charity to the Uttermost

In the peace and security of our homes here in the United States we have come to regard the lot of the farm-bred girl as a pleasant one indeed. With the march of progress in transportation and communication, which has ended forever the so-called isolation of the farm, there is very little left for her to desire.

In her home is every material comfort. All around her is freedom, the most complete and satisfying freedom in the world. On every side there is abundance, everywhere such beauty as only Nature herself can achieve. She has health, happiness, a superfluity of everything she could wish, a security so complete as to be almost if not wholly forgotten in the realization that it is her right, that it always has been hers and always will be hers; and she receives and gives freely of the love and affection which has made the American home what it is.

To these American girls living in their happy farm homes and to their mothers and fathers as well, the case of little Aznir presents a strange and fearful contrast. Aznir also was a farmer's daughter and until she was twelve years old she had lived as happily as any of her American sisters with her father and mother, brothers and sisters, on a fine big farm near the town of Airan in Turkish Armenia.

AN ARMENIAN FARM GIRL

She is 16, but has the face and form of a woman of 40. In the last four years she has run the whole gamut of human suffering and misery.

Aznir never knew the real hapiness of absolute security which American farm girls know so well, of course, because always there was present the haunting fear of oppressive action against her people by their nominal protectors, but in reality their unrelenting enemies, the Turks. And four years ago the dreaded fate which hung always over Aznir and the others in her Armenian farm home fell upon them with a fury and a frightfulness which laid all the land in waste and made of all the future a time of torment and despair.

Today Aznir is 16. In appearance she is a woman of 40. In those last four years she has lived thru all the ages of torture and has run the full gamut of human suffering. She saw the Turks descend upon the home where she had passed all her little life and which she loved as well as American girls love their own homes and turn her family and four hundred other families of the neighborhood out into the highways. They were to be deported, they were told —driven out of the country, forced to leave everything behind them, fortunate indeed if they escaped with their lives. Their homes were destroyed before their eyes by their oppressors.

On the long, cruel forced march of hundreds of miles Aznir saw scores of her friends and neighbors, her own people among them, struck down and killed when they lagged behind from weariness or failing strength. Her mother was slain by a Turkish soldier after only a few days on the road and the broken hearted child and her little sisters and brothers were forced to push on under the whip of the guard who lashed them until they sped along to the limit of their strength.

When the party reached Baghche, about one hundred miles from Aznir's home, nearly all the men, including her father and two of her brothers, were separated from the main party, tied together in pairs and then murdered while the frantic woman and children looked on in terror.

Once more the terrible march was resumed, this time for Marash. Even more often than before the lash fell upon Aznir and her companions as they struggled along over the next weary fifty miles and on every mile along the road were left pathetic, quivering, broken bodies which soon found blessed escape from oppression in death.

Three times on that march Arab bands darted down from the hills and carried away girls and woman of the party to a fate worse than death itself. The Turkish soldiers offered little resistence to these raiders, apparently believing themselves well rid of some of their unhappy charges. Over Aznir, however, they maintained a close protection when the Arabs came because she was fair to look upon and one of them at least had his own plans regarding little Aznir's future.

From Marash they went on to Aintab, losing on the way many of their number who were struck down by their guards, fell from exhaustion and were left to die by the roadside or were seized by the Arab bands which followed them constantly.

At Aintab all the boys above five years were separted from the other exiles and, as had been done with the men at Baghche, they were bound together in pairs, their hands tied behind them, and they were shot. Aznir saw two of her little brothers die in this way and two days later her last brother, a tot of three, was drowned before her eyes when all the remaining little boys were thrown into the river Euphrates upon the arrival of the exiles at Nizip.

Then came the turn of the woman who had survived the rigors of the march and the raids of the Arabs, and on the banks of the Euphrates hundreds of them were tied together in pairs, shot or struck down with swords and knives, and their bodies cast into the river.

Aznir saw it all as did several other of the more attractive younger women and even in the revolting horror of the dreadful scene she could only wonder why she and they had been spared. Only too soon was she to know when the soldier who had protected her from the Arabs came to claim her as his own as other Turks claimed the other girls who had been spared.

For two months Aznir was forced to submit to the insults of the soldier who had claimed her and then was passed on to another. When she finally escaped from this man it was only to fall into the hands of an Arab who held her in slavery for three years and then sold her to another Arab for a sum equal to about $8 in American money. This man must have treasured Aznir more than the price he paid for her would indicate for he tattooed her face as a means of identification and thru this device procured her return to him when she fled and secreted herself in a well. A little later, however, he in turn sold Aznir to a Turkish soldier whose brutality exceeded even anything she had suffered before.

It was while in this man's possession that Aznir learned of the presence of the British at Aleppo and stealing away in the night she fell in with other refugees and eventually found her way within the British lines.

Today the orphaned Aznir, centuries old in suffering at 16, with the face and figure of a woman of 40, is being cared for in an orphanage maintained by the Near East Relief. She is only one of more than 250,000 homeless, fatherless, motherless waifs whose experience has been not unlike her own.

What farm girl of America can visualize the thoughts of poor little Aznir, the farm girl of Armenia, and her 250,000 pitiful little fellow victims of Turkish frightfulness as they review in their minds the horrid events of those tragic four years—of the once happy homes now gone forever, of mothers, fathers, brothers, sisters, friends, murdered or enslaved; of their own frightful sufferings; and at last of the home they have found in the orphanage provided for them by their friends in far off America.

MANY DISABLED STILL IN ARMY HOSPITALS

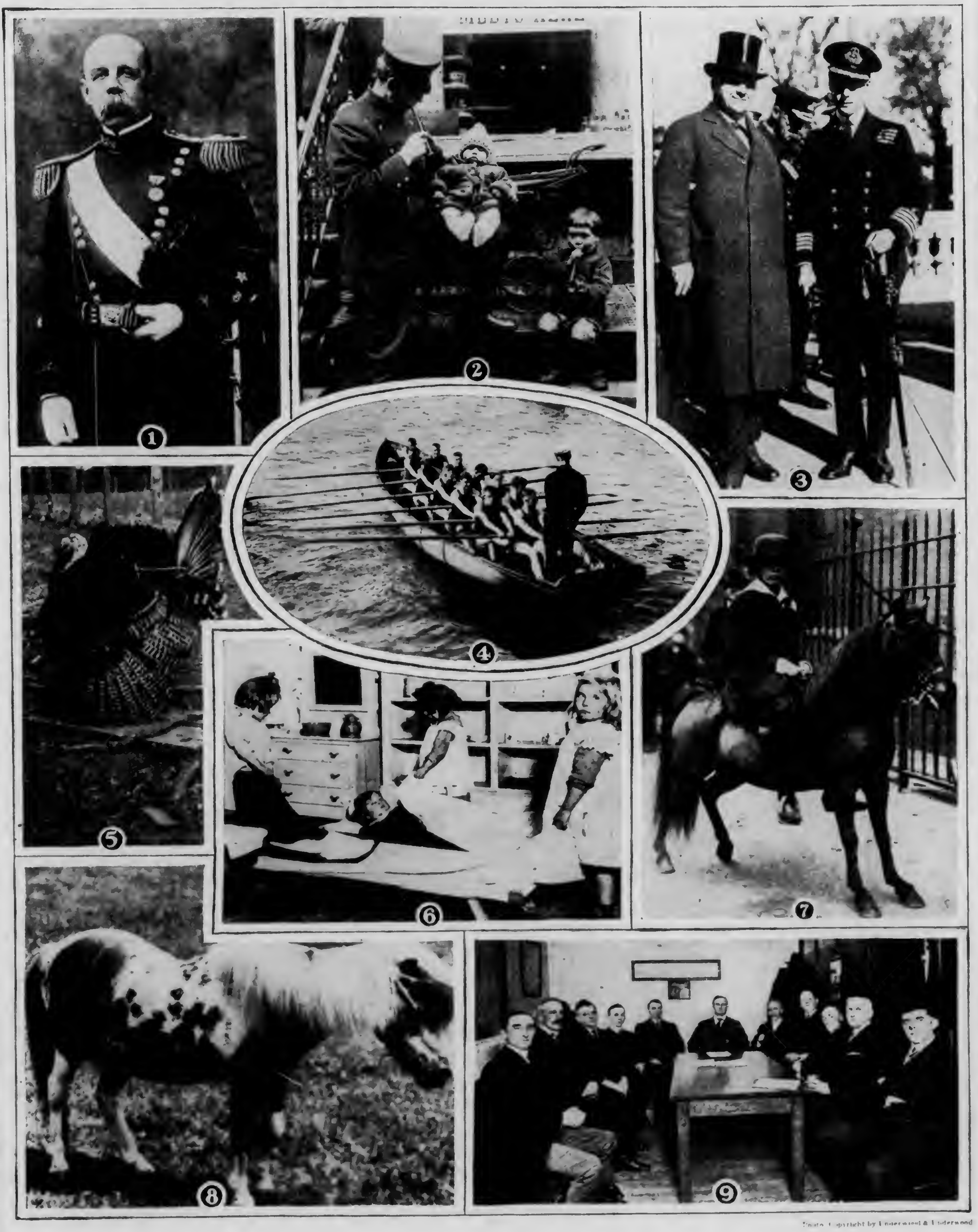
Altho it is a year since the signing of the armistice, about 25,000 of our American boys are still in hospitals reminding us of part of the price we paid in the great war.

These are boys who suffered from some serious wound or disease, and are courageously pulling thru by patience and medical skill. Perhaps only one-half of this number will ever be well enough to take up life normally again. They will need the most thoro vocational retraining that can be given, as they must learn from the beginning to master the new profession compatible with their new condition.

The Federal Board for Vocational Education is planning for these seriously disabled men. Already vocational advisers in hospitals have talked with the men, and given them something to look forward to in the way of a useful life. As soon as they are released from the hospitals, they will be given training in some vocation for which they are fitted and by which they can become self-supporting citizens.

Printed stationery gives a business air to the farm.

PASSING EVENTS IN PICTURES



Photos Copyright by Underwood & Underwood

1.—Major General Henry G. Sharp, Commander of South Eastern Dept., U. S. Army.

2.—Policeman Attending Babies while Women Vote in New York City.

3.—The Prince of Wales and Sec'y of Navy Daniels Reviewing Midshipmen.

4.—U. S. S. "New Mexico's" Race Boat Crew Practicing for the Race.

5.—The Most Popular Bird in America about this Time of Year.

6.—London Believes in Teaching her Children the art of Housekeeping.

7.—The Winner in the Pony Class at the Madison Square Horse Show.

8.—Algonquin, the 31-Year old Pony, Famous at the White House when Roosevelt Boys Reigned.

9.—Meeting of Ontario's First Farmer Cabinet.

To men—give Comfort for Christmas

HERE'S the gift for a real he-man—useful, sensible and one he will appreciate. Leading dealers are featuring Presidents in attractive gift packages.

Presidents are made from light or medium Shirley-woven elastic webbing, for dress or business wear. Metal parts are brass and will not rust. Guarantee band on each pair. Be sure the name—"President"—is on each buckle. It stands for comfort, service and satisfaction.

President Suspender Co.
Shirley, Mass.

such a useful gift
President Suspenders

SLIDEWELL
H.H.&C.
COLLARS

Unsurpassed for Long Wear
Save your Tie, Time and Temper
Hall, Hartwell & Co., Makers, Troy, N.Y.

RAW FURS
WANTED
MR. RAW FUR SHIPPER—We want your raw furs. Put your own assortment on them and mail us a copy. If we cannot net you more than you expect, we will return them to you, express paid. Our price list is yours for the asking.
Milton Schreiber & Co.
RAW FURS
Dept. W
138-140 West 29th St.
NEW YORK CITY

Skunk and Muskrat Wanted
24 years in the fur business. I have no rents to pay, sell direct to manufacturers and can pay you top prices for all kinds of furs. Send me a trial shipment; if I please you, tell others; if not, tell me.
George Sipler, FUR DEALER THREE BRIDGES, N. J.

PROFITS FROM PUREBREDS

How many farmers realize how profitable the combination of purebred stock and advertising can be made? Most of us are looking for a way to make more money, and this combination certainly is a good one for the purpose. I am not thinking so much of cattle and horses as of swine and poultry because the average farmer can get into purebreds with these much more easily than is possible with the larger animals.

A purebred sow, in pig, can be purchased at an outlay often not much greater than the cost of a common sow. Her offspring, sold as eight-weeks pigs for breeding stock, will bring at least twice as much as the pigs out of the common sow for fattening purposes, with practically no extra care. Weanlings that are "just pigs" have been selling locally at five to eight dollars each, while at the same time, purebreds of the same age sell for from ten dollars each to fifty dollars the trio, and up, depending upon the breeding.

A glance at the stock advertisements in almost any farm paper will show this to be true. In view of the small extra expense and trouble involved, this difference in price is certainly worth getting. There is another point to be considered, the man who is in hogs from this angle does not run the risk of a slump in prices in such proportion as does the man who is making pork. Those who put a lot of high-priced grain into hogs this past season can appreciate this, unless they were fortunate enough to sell their hogs in August before prices fell. It is, of course, true that not every purebred is a good breeding animal, and such specimens should be made into pork. What has been said of hogs applies with equal force to poultry.

The man whose chickens are purebred can sell his eggs for hatching during the season for two or three times the market price, and dispose of his surplus cockerels as breeding stock at the same figure. I am speaking of ordinary good stock; "fancy" stock brings a much higher price. Here again, there is a little extra expense and trouble involved, but the increased returns make up for this many times over.

It very often happens that there is no local market for a man's stock. If an advertisement in the local paper does not bring results, nine times out of ten a few lines in a good farm paper will bring more orders than can be filled. It is usually the case that someone is looking for just what you have to sell, and is only too glad to purchase it. A little "ad" is the best way to get in touch with him.

I am going to quote two instances from personal experiences to show how advertising pays. We have a small, but select, flock of Black Minorcas, and found ourselves at the beginning of the breeding season last year with five extra cockerels. The butcher would have taken them, but at a discount because they were black. We advertised them once, in a farm paper, and sold them all to one man. The ad cost a dollar and a half, and the cockerels brought a dollar a pound! We reteurned a number of orders beside, having no more birds to sell, and received a great many inquiries and orders for hatching eggs.

Last spring we raised a number of Pekin ducks, and during the summer decided to dispose of them. The folks around here are prejudiced against ducks, and it would have been a hard matter to give them away locally. The market was dull, but an advertisement in a farm paper reached a man several states away who sent his check for the whole bunch, at a considerable advance above the market price.

Of course, the seller of purebreds must be careful not to misrepresent, to sell nothing but good stock, and to live up to his agreements. Rightly managed, the business can be made to return substantial profits.—R. L. Scharring-Hausen.

HEARINGS ON THE EASTERN SHEEP INDUSTRY

The United States Tariff Commission is now engaged in a systematic study of the sheep and wool industry in this country as related to tariff legislation. The Commission will conduct hearings in relation to this subject early in December, supplementary to hearings which have recently been held in the range states of the west. Commissioner W. S. Culbertson will conduct these hearings which will be held in Columbus, Ohio, and Chicago, Illinois. The hearing at Columbus will be held on December 3rd in the hearing room of the State Department of Agriculture in the State House beginning at 10 o'clock A. M. The hearing at Chicago will be held on December 5th in the Stock Yards' Inn beginning at 10 o'clock A. M.

These hearings will be entirely public in character and will be open to all persons who care to attend them. Those who are interested in the subject matter are especially invited to present all available related facts and to discuss them fully before the Commissioner.

WINTER MANAGEMENT OF BREEDING EWES

Experience has shown that ewes should always be healthy, have good teeth and be strong and vigorous. They should carry a moderate amount of flesh and it is essential that they be so cared for that they will not lose weight during the winter. Well fed ewes are most likely to give birth to strong, vigorous lambs. Ewes that are in good condition will be more liberal milkers and thus better mothers. It is during the suckling period that the greatest demands are made on the ewes and in order to have the ewes in condition to stand this drain on their system it is necessary for us to see to it that they are in good condition of flesh prior to lambing. To be sure to have them in proper condition we must begin in the fall and feed them properly. This cannot be accomplished in just a few days or even a month.

While it is necessary to keep the ewes gaining during the winter and up until lambing time and they should receive liberal feed during this time, yet a large portion of their rations may be made up of cheap feeds of little commercial value. On most farms there are pastures, stubble fields and corn stalks to be utilized. Bluegrass and timothy pastures may be grazed much of the time during the fall, but it is safer not to depend on these as the only feeds at this time. They should be used, but not as the sole ration.

When the ewes are in thin condition, it will be advisable to begin feeding grain along with roughage soon after the first of December. Unless the ewes are very thin in flesh, it is not necessary to feed more than a half pound a head daily for ewes weighing 150 pounds. A good ration consists of equal parts of oats and bran or two parts of oats, two parts bran and one part of corn. Where available, it may be economical to feed one-half to two pounds of good clean corn silage per ewe per day and about the same weight of clover or alfalfa hay. Where a good legume, such as clover, alfalfa or soybean hay makes up the major portion of the roughage, it will probably not be necessary to give the ewes that are in good condition any grain until about six weeks before lambing. At this time, it may be well to feed the ewes a little grain, about one-quarter pound a head daily of equal parts of corn and oats. In any event, in compounding rations the farmer must realize that economy and efficiency should be the watchwords and feed enough to have the ewes gain from 15 to 25 pounds each during the winter.—D. A. Spencer.

SUPPORTING A MILLION UNPROFITABLE COWS

Few dairymen know the profits of their herds and fewer know the profitable and unprofitable cows. Almost a million dairy cows in Pennsylvania produce an average of only 4,000 pounds of milk per year. In most localities in Pennsylvania cows that produce no more than this are unprofitable.

Extension circular No. 43 of the Pennsylvania State College School of Agriculture is authority for the statement that in general two cows of equal size require the same amount of feed to maintain them or to keep them to a constant weight.

It should be remembered that feed in addition to the maintenance ration is necessary to produce milk. Figures published by the Pennsylvania Experiment Station show that it costs 10 cents a day to maintain a medium size cow, 10 cents more for the first ten pounds of milk, and 10 cents more for each additional ten pounds In other words, a thirty-pound cow would produce milk at 40 cents a day while it would cost 60 cents to produce the same amount of milk by three-cows of the ten pound sort.

A cow should be fed according to her size and the amount of milk she is producing. By knowing whether or not a cow responds to an increase in feed her maximum production can be ascertained. Too often a cow that would produce a large amount of milk is not given a chance.

Dig out the barberry, says the Pennsylvania Department of Agriculture, Bureau of Plant Industry. All the evidence that is available indicates that this plant is a very important factor in increasing wheat rust. The Japanese barberry is harmless but the common variety harbors the rust.

Printed stationery gives a business air to the farm, and helps to make a good impression.

Keep Them Fit For Winter Work

Are your horses always ready for heavy work, cows giving lots of milk on the coldest days, hogs putting on pork? It all depends upon their condition.

Pratts Animal Regulator

Will keep the system toned up so that feed is thoroughly digested animals are healthy and respond at once. Pratts Animal Regulator is used by successful farmers and stock-owners the world over.

"Your Money Back If YOU Are Not Satisfied"
PRATT FOOD COMPANY
Sold by 60,000 dealers
Pratts
A2

Spend a cent before You Ship 1¢
SOBEL

Before you ship your furs elsewhere, send us a postal card for our price list. It will pay you. Costs only a cent to find out. You will be astonished at the prices we pay. Send quick. We need shipments now and will pay you well for your pelts.

RAW FURS
Those desiring to ship at once can do so in confidence. We guarantee highest prices and liberal assortments. Our 33 years experience is your protection.
Prices are soaring high right now This means we can pay you more than ever before. Ship immediately or send for price list. Act quick!
PRICE LIST FREE WRITE TODAY
N. Sobel, Inc.
22 West 27th St.
Dept. 16-New York

Ship Your Raw Furs to The House That Satisfies

There is a certain feeling of satisfaction in marketing your Raw Furs to the best advantage. Let us give you that sense of gratification that will surely be yours when you receive our check for one hundred cents on every dollar. Values based on unexcelled marketing conditions, liberal assortments, and 30 years of square dealing.

We pay all express and parcel post charges and deduct no commission. Send for our free price list and tags.

L. RABINOWITZ 121 W. 29th St. NEW YORK

FREE INFORMATION
Largest returns on your small catch of furs. We are tanners and manufacturers of cattle and horse hides for coats, robes, rugs and mittens. Ladies Furs from coon, opossum, fox, muskrats, mink, coyote, badgers, skunk and rabbits. Taxidermist work on deer heads and rugs. Tell us the kind of fur you have and we will answer fully.
W. W. WEAVER, Custom Tanner, Reading, Mich.

You Can't Fool the Sheller

WELL MATURED ears with deep, heavy kernels give a good yield at shelling time. No other kind will. The crop which has sufficient plantfood is the crop that fills the bin. If the crop lacks plantfood during the summer the sheller will tell the story. The yield will be disappointing—maybe the corn will be soft and won't even shell.

Big yields require plenty of available plantfood. There must be ammonia for a quick start and steady growth; potash to strengthen the stalks and make big, heavy ears; and phosphoric acid to fill and harden those ears as well as to make strong and vigorous root systems.

Manure provides some of the needed plantfood but *there is never enough manure to go around.* Fertilizer is needed to *make up the deficiency. Use enough to insure a big yield of well-filled, mature ears*—a crop that will stand the test of the sheller. There is more profit in that kind of corn.

A postcard request will bring you our booklet, *"More Plantfood for More Corn."* Every farmer should have a copy of this little book; also one of our Automatic Formula Finders which will help him select the right fertilizer for each crop that is grown on his farm. Both are free for the asking. Write for them today.

"High Analysis" Fertilizer for Corn
One of These Will Fit the Conditions on Your Farm
The figures represent percentages of ammonia, available phosphoric acid and potash, in the order given:
For sandy and loamy soils, and all worn soils, especially where the manure supply is short—
2-10-6 2-10-4 2-12-2
For use on clay loams or other soils which contain plenty of potash—
2-12-0
For use where the soil has plenty of available ammonia; where plenty of manure is used; where legumes are plowed under—
0-10-8 0-12-4 0-12-2 0-16-0

SOIL IMPROVEMENT COMMITTEE
of the National Fertilizer Association
CHICAGO
1717 Lumber Exchange Building
BALTIMORE
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KEZIAH COFFIN

By JOSEPH C. LINCOLN

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"What!" she exclaimed. "Don't want but one piece of huckleberry pie? Why, a week ago you ate three and looked kind of disappointed 'cause the dish was empty. What is the matter? Are you sick?"

"No, Mrs. Coffin," replied the Reverend John. "No, I'm not sick. I just don't feel hungry, that's all."

But the answer was unsatisfactory. Mr. Ellery laughed, changed the subject, and wandered out into the garden, where Keziah saw him, shortly afterwards, intently regarding nothing in particular with a rapt stare. She watched him for a few moments and then, with a puzzled shake of the head, returned to her work. She believed that he was troubled about something and was herself troubled in consequence.

His absent-mindedness was most acute on Sunday evenings, before prayer meeting, and after he had returned from the afternoon at Captain Elkanah's.

"Say, Mr. Ellery," she said, on one of these Sunday evenings, "do you know, it seems to me that Elkanah's meals must go to your head. Don't have any of his granddad's New England rum, do you? They tell me he's got some of that down cellar that he doles out occasionally to his very particular friends. That's the common yarn around town, tho I couldn't swear 'twas gospel."

The minister smiled and denied acquaintanceship with the New England beverage.

"Humph! Then it must be the other thing. You ain't in love, are you?"

The young man started, colored, and was plainly embarrassed.

"In love?" he repeated. "In love, Mrs. Coffin?"

"Yes, in love. Annabel hasn't landed a male at last, has she? She's a line over the side for a long time."

The hearty laugh with which this was received settled the question of Annabel's success. Keziah was relieved.

"Well, I'm glad of that," she said. "I ain't got any grudge against Annabel, but neither have I got one against you. Another man in that family would have an easy time in one way, he wouldn't have to do any thinkin' for himself—Elkanah and his daughter would do all that was necessary. So you're not in love. Then I don't know what does ail you. I'll say this, tho, for a body that ain't in love you certainly stay with the Danielses a long time. You went there right after meetin' this noon and now it's seven o'clock and you've just got home. And 'twas the same last Sunday and the one before. Been there all the time, have you?"

She knew he had not, because she had seen him pass the parsonage, on the opposite side of the road, two hours before. But she was curious to learn what his reply would be. It was noncommittal.

"No," he said slowly. "Not all the time. I—er—went for a short walk."

Before she could inquire concerning that walk he had entered the study and closed the door after him.

During the week which followed this particular conversation he was more absent-minded than ever. There were evenings when he spoke scarcely a word, but sat silent in his chair, while Keziah, looking up from her mending, watched him and guessed and wondered. After he had gone to his room for the night, she would hear him pacing the floor, back and forth. She asked no more questions, however; minding her own business was a specialty of Keziah's, and it was a rare quality in Trumet.

Sunday was a cloudy, warm day, "muggy," so Captain Zeb described it. After the morning service Mr. Ellery, as usual, went home with Captain Daniels and Annabel. Keziah returned to the parsonage, ate a lonely dinner, washed the dishes, and sat down to read a library book. She read for an hour and then, finding it difficult to keep her mind on the story, gave it up, closed the book and, rising, walked to the window. But the misty, hot loneliness of the afternoon, was neither interesting nor cheerful, so she turned away and went upstairs to her own room. Her trunk was in one corner of this room and she unlocked it, taking from a compartment of the tray a rosewood writing case, inlaid with mother-of-pearl, a present from her father, who had brought it home from sea when she was a girl.

From the case she took a packet of letters and a daguerreotype. The latter was the portrait of a young man, in high-collared coat, stock, and fancy waistcoat. His hair, worn long over the ears, was smooth with a shine that suggested oil, and in his shirt front was a large pin, which might possibly have been mistaken by a credulous observer for a diamond. Mrs. Coffin looked at the daguerreotype, sighed, shuddered, and laid it aside. Then she opened the packet of letters. Selecting one from the top of the pile, she read it slowly. And, as she read, she sighed again.

She did not hear the back door of the parsonage open and close softly. Nor did she hear the cautious footsteps in the rooms below. What aroused her from her reading was her own name, spoken at the foot of the stairs.

"Keziah! Keziah, are you there?"

She started, sprang up, and ran out into the hall, the letter still in her hand.

"Who is it?" she asked sharply. "Mr. Ellery, is that you?"

"No," was the answer. It's me—Nat. Are you busy, Keziah? I want to see you for a minute."

The housekeeper hurriedly thrust the letter into her waist.

"I'll be right down, Nat," she answered. "I'm comin'."

He was in the sitting room when she entered. He was wearing his Sunday suit of blue and his soft felt hat was on the center table. She held out her hand and he shook it heartily.

"Well!" she observed, smiling, "I declare if I don't believe you've got the tiptoe habit. This is the second time you've sneaked into the house and scared me 'most to death. I asked you before if you wa'nt ashamed of yourself and now I ask it again."

Before he could reply she caught a glimpse of his face.

"What is it?" she asked. "What is the matter? Is anybody sick? Is your father——"

"No, he's all right. That is, he's as well as he has been lately, tho that isn't sayin' much."

"Is Grace——"

"No, she's all right; too, I guess. Been sort of quiet and sorrowful for the last few weeks—or I've seemed to notice that she has—but I cal'late it's nothin' serious. I wouldn't wonder if the same thing that's troublin' her is what ails me."

"But what is it? Why don't you tell me?"

"I'm goin' to tell you, Keziah. That's what I come here for. I——"

"Sit down, can't you? Don't stand up there like a lighthouse, shuttin' out the whole broadside of the room. You are the biggest thing!"

Captain Hammond selected the most substantial chair in the apartment and sat down upon it. He looked at his friend and shook his head.

"No use, Keziah," he said. "If I was as deep down in the blues as the bottom of the Whale Deep,a look at that face of yours would pull me to the top again. You're a good woman!"

"Thanks! When I have spare time on my hands I'll practice tryin' to believe that. But what is the trouble, Nat? Out with it."

"Well, Keziah, it's trouble enough Dad and I have had a fallin' out."

Mrs. Coffin's mouth and eyes opened.

"What?" she cried, in utter astonishment.

"Yes. It's true. We had what was next door to a real quarrel after dinner to-day. It would have been a real one if I hadn't walked off and left him. He's as set as the rock of Gibraltar, and——"

"And your foundations ain't given to slippin' much. Nat Hammond, I'm surprised at you! What was it all about? Religion?"

"No, not a sliver of religion in it. If 'twas that, I could dodge, or haul down my colors, if I had to. But it's somethin' worse, enough sight worse. Somethin' I can't do—even for dad—and won't either. Keziah, he's dead set on my marryin' Grace. Says if I don't he'll know that I don't really care a tin nickel for him, or for his wishes, or what becomes of the girl after he's gone."

"Nat!"

"It's a fact. You see, dad realizes, better'n I thought he did, that his health is pretty shaky and that he is likely to founder 'most any time. He says that don't worry him; if he knew Grace and I were provided for he'd slip his cable with a clean manifest. But the dream of his life, he says, has been that we should marry. And he wants to see it done."

Keziah was silent for a moment. Then she said slowly:

"And Grace herself? How does she feel about it? Has he spoken to her?"

"I don't know. I guess likely he has. Perhaps that's why she's been so sort of mournful lately. But never mind whether he has or not; I won't do it and I told him so. He got red hot in a jiffy. I was ungrateful and stubborn and all sorts of things. And I, bein' a Hammond, with some of the Hammond balkiness in me, I set my foot down as hard as his. And we had it until—until—well, until I saw him stagger and tremble so that I actually got scared and feared he was goin' to keel over where he stood.

"'Why can't you?' he kept sayin'. 'But why can't you? Ain't she a girl anyone would be proud to have for a wife?' 'Course there was no answer to that but yes. Then back he comes again with 'Then why can't you?' At last, bein' frightened, as I said, that he might have another shock or somethin' I said I'd think it over and come away and left him. And I come straight to you. Keziah what shall I do? What can you say to help me?"

Keziah was silent. She was looking, not at her companion, but at the carpet center of one of the braided rugs on the floor. Her face was very grave and the lines about her mouth seemed to deepen. Her hands, clasped in her lap, tightened one upon the other. But her voice was calm when, at last, she spoke.

"Nat," she said, "there's only one thing I can say. And that's what your father said: Why can't you?"

The captain sprang from his chair.

"What?" he cried incredulously. "What are you sayin'?"

"Just what your father said, Nat. Why can't you marry Grace? She's a dear, good girl and——"

"That be—keelhauled! Keziah, Coffin, you sit there and ask me why I can't marry her! You do-"

"Yes, Nat."

"Keziah, you're crazy! Don't talk to me like that. We're not jokin' now. You know why I can't marry her, nor anyone else in this round world but you."

"Nat, I can't marry you."

"I know, I know. You're always sayin' that. But you don't mean it. You can't mean it. Why, you and me have been picked out for each other by the Almighty, Keziah. I swear I believe just that. We went together when we were boy and girl, to parties and such. We was promised when I first went to sea. If it hadn't been for that fool row we had—and 'twas all my fault and I know it— you never would have let that da—that miserable Anse Coffin come near you. And when 'twas too late and you'd married him, the mean, drunken, cruel——"

"Hush, Nat! hush! Stop it!"

"He was, and you know he was. Yes, and worse besides. Runnin' off and leavin' a wife like you to—Oh, my God! when I think I might have been your husband to look out for you and take care of you! That you might have been with me on board my ships. That, when I come down the companion on stormy nights I might have found you there to comfort me and— O Keziah! we aren't young any more. What's the use of foolin'? I want you. I'm goin' to have you. Coffin is dead these ten years. When I heard he was drowned off there in Singapore, all I could say was: 'Serve him right!' And I say it now. Say yes, and let's be happy. Do!"

"I can't, Nat."

"Why not? For Heaven sakes! why not? Don't you care for me? You've let me think—well, at any rate, I have thought you did. You used to. Don't you?"

"Nat, I—I care for you more than anybody else on earth. But I can't marry you. Oh, don't keep askin' it! Please don't. I can't marry you, Nat. No.!"

"Well, not now, maybe. Not this month, or even this year, perhaps, but some day——"

"No, Nat. You must listen. There's no use of this goin' on any longer. I mean it. I can't marry you."

"You won't, you mean."

"Well, if you wish to think so. Then I won't.'

"But by and by——"

"No, not by and by. Never, Nat. Never."

He drew his hand across his forehead.

"Never!" he repeated, more to himself than to her.

"Never. Yes, Nat."

"Then, by the everlastin'! I'll do somethin'——"

"No, no, you won't. Nat Hammond, I know you. You're a great big, brave-hearted, sensible man. You won't be foolish. You'll do—yes, I think you'd better do just what your father asks you to do. Marry Grace, if she wants you and will have you. She'll make you a good wife; you'll learn to care for her, and I know she'll have the best husband that a girl could hope for. And you and I will be friends, just as we've always been, and——"

"Keziah, stop that! Stop it, do you hear! I don't want to listen to such stuff. I tell you I'm past soft soap, and I didn't think you'd give it to me."

"Nat!"

"Oh, yes, 'Nat'! A lot you care for 'Nat'! Not a reason on God's footstool why you won't have me—except one, and that one that you don't want me."

"Please, Nat! I can hardly believe this is you. This trouble with your father has upset you. You don't mean what you say. You're not talkin' like yourself and——"

"Stop it, I tell you. I don't feel like myself. I banked on you Keziah. I've lived for you. And now — O Keziah, take it back! Give me a little hope, just enough to keep my head above water."

"I'd like to, Nat. I only wish I could. But 'twouldn't be any use. I can't do it."

He snatched his hat from the table and strode to the door. Turning, he looked at her.

"All right," he said chokingly. "All right. Good-by."

His steps sounded on the oilcloth of the kitchen. Then the back door slamned. He was gone.

Keziah started, as if the slam of the door had been an electric shock. During the interview she had been pale and grave but outwardly calm. Now she sank wearily down in the chair from which she had risen and her head dropped forward upon her arms on the table. The letter she had been reading before Captain Nat's arrival fell from her waist to the floor and lay there, its badly spelled and blotted lines showing black and fateful against the white paper. And she cried, tears of utter loneliness and despir.

The clouds thickened as the afternoon passed. The shadows in the lonely sitting room deepened. There came a knock at the dining-room door.

Keziah sprang from her chair, smoothed her hair, hastily wiped her eyes, picked up the dropped letter and went to admit the visitor, whoever he or she might be. She was glad of the shadows, they prevented her face from being seen too plainly.

"Good afternoon," she said, opening the door. "Oh! it's you, is it?"

"Yes," admitted Abishai Pepper, standing on the stone step, and shifting uneasily from one foot to the other. "Yes, Keziah, it's—it's me, thank you."

"Don't mention it. Well, is Laviny with you?"

"No—o, she ain't. She—she didn't come."

"Hum! Did she know you was comin'?"

(Continued next week.)

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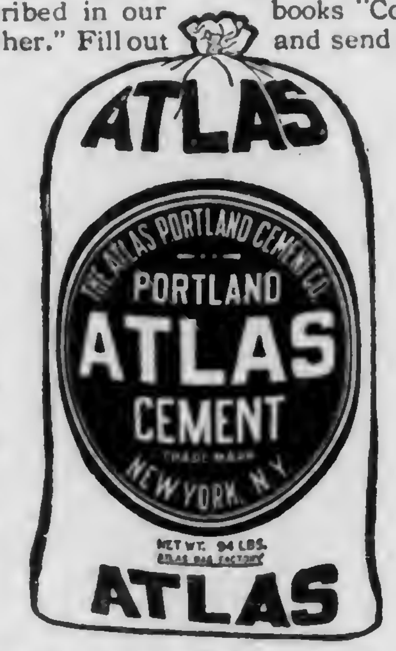

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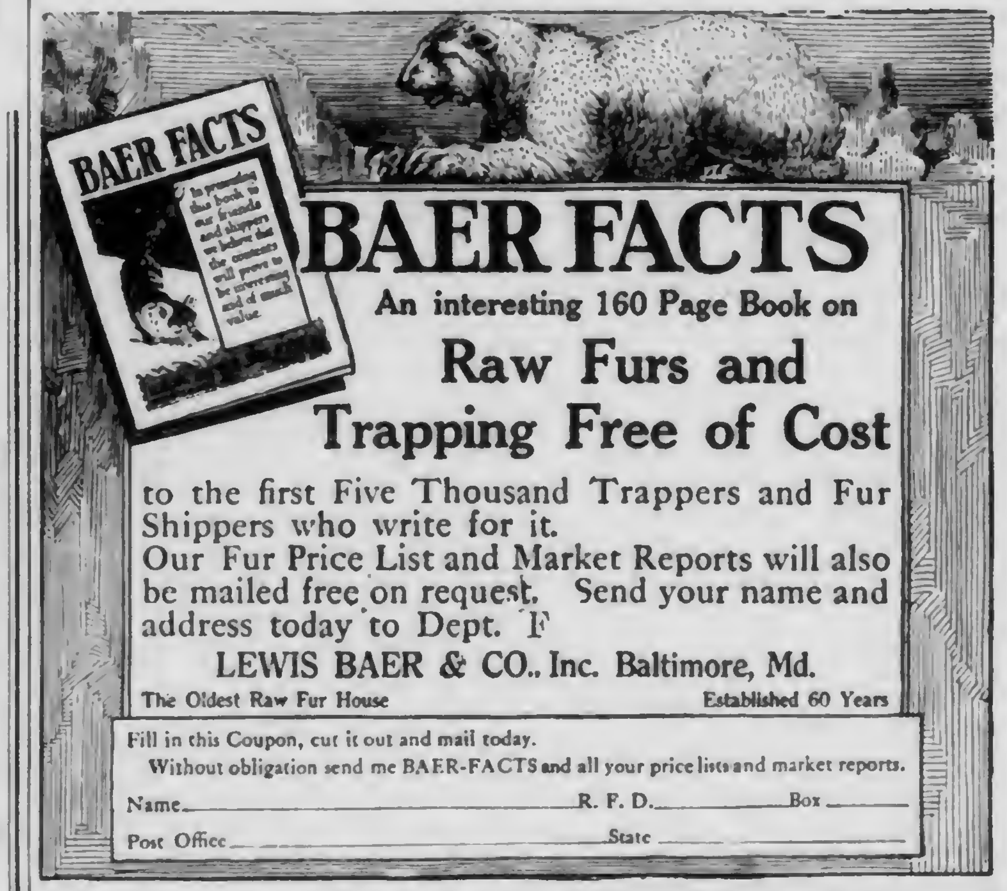

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Markets

PHILADELPHIA PRODUCE

Philadelphia, Pa., Dec. 8, 1919.

The supplies of potatoes are much lighter than they were a week ago, and there is a firmer feeling with prices somewhat higher and showing a still higher tendency. Pennsylvania potatoes sold today from $2.75@3.00 per cwt., with Maine stock at $2.70@2.90 and New York state stock mostly $2.70@2.80 with some Red Skins at $2.50. The Delaware and Maryland Hoosiers show a sharp advance as they are selling from $2.25@2.50 per cwt. The potatoes hauled in by the nearby farmers are firmer at mostly 90@$1.10 per ⅝ basket.

Sweet potatoes are in moderate supply and the market is a trifle higher than it was last week with No. 1 Maryland and Delaware hampers selling at $1.80@1.90 for the No. 1s with the No. 2s at $1.10@1.40. The Eastern Shore barreled stock is in light supply and firm with No. 1s at $4.25@4.75 per barrel and No. 2s at $2.50@3.00. Nearby New Jersey sweet potatoes remain practically unchanged at $1.15@1.50 per ⅝ basket, with the outside prices being obtained for fancy house sweets only. Southern yams and haymans continue in light suppyl and the market is firmer at $4.50@4.75 per barrel.

Vegetables

As was noted in these columns last week practically the only vegetables being supplied by our nearby Pennsylvania and New Jersey farmers are the roots stock such as beets, carrots, parsnips and turnips besides a few hot-house tomatoes and mushrooms and celery. These nearby vegetables are in active demand at about the following prices: beets, $2@2.50 per barrel; do., per bunch 3@5c. Carrots per barrel $2.50@3.25; per bunch 2½@4c. Parsnips per barrel, $2.75@4.00; white turnips 25@50c per ⅝ basket; yellow turnips or rutabagas 60@90c per ⅝ basket; Yellow Aberline turnips 25@40c per ⅝ basket. Pennsylvania celery 5@10c per stalk. Hot-house tomatoes are in light supply and higher. No. 1's ranging from 25@32½c per lb.; with No. 2's at 20@25c. Mushrooms show practically no change in price but there is a wide range in quality best bringing from $1.75@2.25 per No. 3 basket with the poorer grades down to $1.25@1.50 per basket. Hot-house radishes continue scarce and rule firm at 4@4½c per bunch.

With this small assortment of nearby vegetables, the dealers are looking to distant southern points for their supplies to meet the market requirements. There were four cars of Norfolk spinach and three cars of Norfolk kale here this morning and the spinach sold from $2.50@4.25 per barrel, and the kale from $2@2.25 per barrel. Beans, peppers, egg plants, lettuce, romaine, are coming from Florida and selling as follows: Beans, $1.50@4 as to quality; peppers $2.50@4 as to quality; egg plants $2@4 per crate; lettuce $1.75@3.75 per hamper; romaine $2.50@3.50 per hamper. There was also a car of lettuce from California here this morning which sold at $5.25 per box. New York state is still shipping some cabbage, celery, brussel sprouts. Cabbage is selling at a higher price than it did a week ago as sales are now ranging from $65@75 per ton. Celery is also higher ranging from $4@6.50 per crate. Brussel sprouts are more plentiful than they were a week ago and are from 3@5c per quart olwer with prices now ranging from 15@18 per quart. There was also a car of California tomatoes here this morning the best of which sold at $1.50@2 per lug with some poor soft and wasty at 75c per lug. Two cars of California cauliflower were sold $3@3.25 per crate, showing no change from last week's prices. A few Florida tomatoes are arriving mostly by express and are selling all the way from $2@4 per crate as to condition, some being poor green and spotted. New Orleans is shipping us Anise at 3.75@4.25 per barrel Endive at $3.25@3.50 per barrel, Escarole at $3@3.25 per barrel and Shallots at $8@9 per barrel. There are a few Florida cucumbers which are very scarce and poor and sales range from $3.50@7 with strictly fancy exceeding these prices. There are a few hot-house cucumbers coming and these are selling from $2.75@3 per dozen. Onions are coming from New York state, Massachusetts and California mostly and sales are ranging all the way from $5@6 for No. 1 sacks with No. 2's at $2.50@2.75.

Fruits

As we predicted in these columns last week the Apple market has regained to a great extent the decline that took place during the week previous and under continued light supplies the market is now ruling very firm and active and in some instances higher prices are prevailing. Pears are in light supply but are meeting a rather slow demand and movement. Cranberries are ruling steady at prices possibly a little stronger than those prevailing a week ago. At this writing the range of prices on the various fruits now being sold on this market is about as follows: Apples, barrels, Baldwins, $5.50@8.25; Ben Davis, $4.50@6.50; fancy, $7; Greenings, $5@9; Grime's Golden, $5.50@8.50; Hubbardsons, $5.50@8; York Imperials, $6.25@8; 3-inch, 8.50; local storage, $9; Winesaps, $7@8; Twenty Ounce, 6.25@6.75; Rome Beauty, $6@8.50; Stayman Winesaps, $6.25@9.

Pears, Barrels.—Seckels, $7@9; Anjous, $5@6.50.

Cranberries, Barrel, $7@10; per crate $2@3.50.

Poultry

There has been practically no change whatever in either live or dressed poultry during the past week. Supplies have been just about equal to the demand so that there has been no surplus carried over from day to day, and at the same time if receipts had been any heavier there would probably have been a lower market. At this writing range of prices is about as follows. Heavy fowls, 30@32c per lb., small and inferior fowls, 24@28c; fancy chickens, 26@28c; inferior, 23@25c; roosters 21@22c; ducks, 25@34c; geese, 24@26; turkeys, 36@38c. These foregoing prices apply to live poultry. Dressed poultry is selling about as follows: Turkeys, 42@49c; heavy fowls, 35@36c; small fowls, 25@32; nearby broiling chickens, 43@48c; other broilers, 53@46c, ducks, 38@42c.

Eggs

Since our last week's report there has been several advances in the egg market, prices going up a little almost every day until at the close of last week nearby current receipts were bringing 86c, and nearby firsts 88c, with western eggs ranging from 83@88c per dozen. To-day, however, there was a decline in the market and prices fell off 2c per dozen on all grades of eggs, so that at this writing, the prices are as follows: Pennsylvania and other nearby current receipts 84c; firsts, 86c; western firsts, 81@84c; western extra firsts 86c.

Rabbits

The supplies of rabbits are much heavier then they were last week, and prices are quite a little lower. The cottontails are now selling at from 50@65c per pair and the large western Jack rabbits bring from $1.00@1.25 per pair.

LANCASTER PRODUCE MARKET

Lancaster, Pa., Dec. 8, 1919.

Business in the produce markets here was brisk today with an unusual number of farmers attending the curb active. Night marketing has been resumed on an extensive scale following the installation of a new high-powered lighting system by the City. Prices were steady today with the exception of eggs, which jumped to 85 cents per dozen early and then fell back five cents to last week's rate.

Butter and Eggs.—Creamery butter, 75@80c per lb.; country butter, 75@80c lb.; eggs, 80@85c doz.; duck eggs, 90c; goose eggs, 10c each.

Poultry.—Dressed old chickens, $2@2.25 each; dressed young chickens, $1.50@2.00 each; no live fowls offered.

Vegetables.—Cauliflower, 25@30 head; lettuce, 20@30c head; spinach, 20c ½ pk.; turnips, 20c. ½ pk.; green peppers, 3c each; potatoes, 25@30c ½ pk.; do., $1.65@1.75 bu.; sweet potatoes, 35c ½ pk.; cabbage, 8@10c head; lima beans, 20c qt.; oyster plant, 10c bunch.

Fruit.—Apples, 35@50c ½ pk.; pears, 20@25c ½ pk.

Grain Market.—Wheat, $2.20 per bu.; rye, $1.60; corn $1.05; oats, 75c; timothy hay, $28 per ton; mixed hay, $26; wheat straw, $11; oat straw, $10.

BALTIMORE PRODUCE

Baltimore, Md., Dec. 8, 1919.

Butter.—Creamery, western fancy, 72@73c; choice, 70@71c pound prints, 74@75c. Nearby rolls, 40@47c; dairy prints, 50@52c.

Eggs.—State, Pennsylvania and nearby, 80c. Eastern Shore and Virginia, 80c. Southern, 76c.

Live Poultry.—Springers, 26@30c pound; old roosters, 20@21c; old hens, 29c lb.; ducks young; 30@32c; do., poor, 24@25c; guinea fowls, $1.20.

Grains.—Bag lots by sample, $2.10@2.28, wheat, new, No. 1 red, $2.30 do., No. 3, $2.62; garlicky, $2.13; corn, $1.40@1.60; Oats standard white, 85½c; rye, nearby, $1@1.55.

Hay.—No. 1 timothy, $32.50 ton; do., standard, $31.50 ton; light clover, mixed, $29@30 ton, Clover, mixed, $28@29. Tangled rye straw, $14.50. Wheat straw, $12@13. Oat straw, $14@15 ton.

Western Spring Bran, per ton, in 100-pound sacks, $42@43; City Mills Winter bran, per ton, in 100-pound sacks, $50; brown middlings, per ton, in 100-pound sacks, $52, white middlings, per ton, in 80-pound sacks, $65. Quotations on City Mills feeds are jobbing prices.

NEW YORK PRODUCE

New York, Dec. 6, 1919.

Butter steady; receipts, 3569 tubs; creamery, higher than extras, 74@74½c; extra, 92 score, 73½c first, 62@72½c; packing stock, current make, No. 2, 49@49½c.

Eggs firm; receipts, 6224 cases; fresh gathered extras, 93@94c; do., extra first, 89@91c; do., first, 86@88c; state, Pennsylvania and nearby western hennery white, fine to fancy, $1.02@1.05; state, Pennsylvania and nearby hennery whites, ordinary to prime, 75@98c do., brown, 96@98c; do., gathered brown and mixed colors, 93@94c.

Cheese steady; receipts, 353 boxes; state, whole milk, flats, current make, specials, 32½@33c; do., average run, 31¾@32c; state, whole milk, twins, current make, sepcials, 31¼@32c; do., average run, 31c.

Dressed Poultry.—Turkeys, selected, 53@54c; fair, 50@52; old toms and hens, 42@45c. Chickens; dry, 34@45c; Philadelphia, 40@45c; old roosters, 23c.

Live Poultry.—Spring chickens, 27@28c; fowls, 25@30c; roosters, 22c; ducks, 34@35c; geese, 28@30c; guineas, $1.25 pair.

Vegetables.—Potatoes, Maine, $4.25@4.50 165 lbs.; state, $4.50@5.25; New Jersey, $3.75@5; Cabbage, Danish, $60@75 ton; Domestic, $40@60; celery, $2.50@6.50 crate.

PITTSBURGH PRODUCE

Pittsburgh, Pa., Dec. 8, 1919.

Butter.—Prints, 77½@78c; tub, 77@77½; country roll, 58@60c.

Cheese.—New York full cream, 35@36c. Ohio, 34@34½c.; Wisconsin, Swiss, 54@55c.; Philadelphia cream, $1.60 per dozen.

Eggs.—Fresh select, 87@88c; Special, 89@90c; Storage, 64@65c.

Potatoes.—Round, $4.50 per 150 lb. sack. Onions, $4.50@6 sack. Cabbage, $70@75 ton. Lettuce, New York, $2.50@3 box. Sweet potatoes, $4.25@5 barrel. Cauliflower, $3@3.25 bushel. Turnips, $1.75@2 bu. Celery, 40@75c dozen. Beans, wax and green, $3@3.25 bushel. Beets, $1.50 bushel.

Fruit.—Apples, $7.75@9.50 bbl.

PHILADELPHIA LIVE STOCK

Philadelphia, Pa., Dec. 8, 1919.

Receipts of live stock for week ending November 29, were as follows:

	Beef Cattle	Sheep and Lambs	Hogs
Total for Week	1,875	5,709	7,576
Previous Week	2,414	7,493	11,320

Calves.—Receipts of calves last week were 1,184 head against 978 head week previous.

Beef Cattle generally firm, with choice stock a shade higher. Steers, good to choice $16@17.50; do., fair to good, $14@16; common to fair, $12.50@14; cows, fat, per pound, good to choice corn fed, 10@11½c; fair to good 7½@9½; do., common to fair, 4½@7½c; calves extra choice, $20.50@21; fair to good 7½@9½c; do., common to fair, $16.50; heavy, $8.50@12.50; Tennessee, choice, $16@17.50; other southern, $9@13.

Sheep and Lambs.—There was a fair demand for sheep of fine quality and values were steadily maintained under moderate supplies. Offerings of lambs of fine quality were light and the market ruled firm and higher, with a good demand. Sheared sheep, wethers, extra, $10.50@11; good to choice, $9@10; medium, $7.50@8.50; common, $4@5.50; ewes, fat, heavy, $7.50@8.25; spring lambs, choice, $16.50@16.75; medium, $14@15.50; culls and common, $11@12.50.

Hogs.—The market ruled steady under moderate offerings and a fair demand for fine stock. Quotations for best western, $16.50; nearby, good, $14.75@15.25.

City Dressed Stock.—Offerings of steers, heifers and cows were ample for the limited requirements of the trade and prices ruled in buyers' favor. Veal, sheep and lambs were in good request and higher under light offerings. Hogs were dull and easier. Steers, 20@26c; heifers, 15@20c; cows, 13@18c; calves, city dressed, choice, 20@30c; country dressed, 25@27c; sheep, 12@20c; lambs, spring, 26@28c; hogs, 22c.

LIVESTOCK

Lancaster, Pa., Dec. 8.—Cattle.—Receipts, 3810 head, against 4045, many western shipments being delayed; market steady; prices unchanged; good to choice steers, $13.75@15.75; fair to good steers, $13@13.50; medium to fair steers, $12@12.75; smooth and fat bulls, $10@11; medium to good bulls, $9@10; common to medium bulls, $8.50@11; good to choice cows, $9@10.50; fair to good cows, $7@8.75; common to medium cows, $4.50@$5.50; stock bulls, $7.50@9.50; good to prime calves, $19@20; medium to good calves, $16.50@18; common to medium calves, $13@14; best grades oxen, $10@12.50; ordinary grades, $6.50@9; best feeder steers, $12@13.50; common to medium feeders, $8.50@10; best stock steers, $10@11.50; common to medium stockers, $6.25@8.50. Hogs.—Receipts, 1040 head; market active; prices steady; good to prime, $15@16; light to medium, $13.75@14.50; roughs, $13@13.50; stags to sows, $11@12.

East Buffalo, N. Y., Dec. 8.—Cattle.—Receipts, 5200; slow, steady; prime steers, $16.50@17; shipping steers, $15.50@16; butchers, $9@15; yearlings, $14@15.50; heifers, $6.50@11.50; cows, $4@10.50; bulls, $6@10.50; stockers and feeders, $6@10.25; fresh cows and springs, $65@175. Calves.—Receipts, 2500; lower, $5@22. Hogs.—Receipts, 20,000; high; 25c lower; others, 60@65c lower; heavy, $13.50@13.75; mixed and yorkers, $13.60@13.65; light do., and pigs, $13.75@14; roughs, $12@12.25; stags, $9@11. Sheep and lambs. Receipts, 16,000; 25@50c lower; lambs, $8.50@15.75; yearlings, $8@12; wethers, $9.50@10; ewes, $3@9; mixed sheep, $9@9.50.

Pittsburgh, Dec. 8.—Cattle steady; supply 70 loads; prime, $15.50@16. Sheep steady; supply 20 double-decks; prime wethers, $9.50@12.25; culls and common, $3@4.50; lambs, $10@16; veal calves, $20@21. Hogs lower, supply 70 double-decks; prime heavies, $13.50; mediums, heavy yorkers, light yorkers and pigs, $13.65@13.75; roughs, $10@12.25.

Chicago, Dec. 8.—Hogs.—Receipts, 59,000 estimated tomorrow, 75,000; mostly 50c lower; bulk, $12.65@13; top, $13.50; heavy, $12.65@13; medium, $12.75@13; light, $12.65@13; light light, $12.25@12.75; heavy packing sows smooth, $12.25@12.60; packing sows, rough, $11.75@12.25; pigs, $11.75@12.00. Cattle.—Receipts, 24,000; estimated tomorrow, 14,000; strong; beef steers medium and heavy weight, choice and prime, $18.50@21.50; medium and good, $11.25@18.50; common, $8.75@11.25; light weight, good and choice, $13.85@20.75; common and medium, $8@13.85; butcher cattle, heifers, $6.50@15; cows, $6.35@13.75; canners and cutters, $5.36@6.35; veal calves, $16.50@17.50; feeder steers, $7@12.25; stocker steers, $6@10.75; western range steers, $7.50@15; cows and heifers, $6.50@12.50. Sheep.—Receipts, 23,000; estimated tomorrow, 25,000; strong; lambs, $14.50@16.25; culls and common, $10@14; ewes, medium, good and choice, $7.75@9.40; culls and common, $4@7.25; breeding, $7@11.25.

PHILADELPHIA HAY AND GRAIN

Philadelphia, Pa., Dec. 8, 1919.

Bailed Hay and Straw.—Receipts, 180 tons of hay and 4 cars of straw. Desirable grades well cleaned up and firm Timothy hay choice, $34; do., No. 1, $33; do., No. 2, $30@31; do., No. 3, $27@28; clover-mixed hay, light mixed, $30@31; do., No. 1 mixed, $27@28; straw, No. 1 straight rye, $15@15.50; do., No. 3, $14@14.50; do., No. 1 tangled rye, $14; do., No. 2, $12.50@13; do., No. 1 wheat straw, $14@14.50; do., No. 2, $12.50@13; do., No. 1 oat straw, $14.50@15; do., No. 2, $12.50@13.

Bran.—Offerings light and market firm. Car lots to arrive, including sacks; Soft winter bran, western, in 100-lb. sacks, per ton, $47.50@48; spring bran, in 100-lb. sacks, per ton, $46.50@47.

Corn.—No. 2, yellow, $1.70@1.72.

Oats.—No. 2, white, 89@88½c; No. 3, 87@87¼c.

NEW YORK HAY AND GRAIN

New York City, Dec. 8, 1919.

Feed.—The market for mill feed was steady, with offers comparatively light, but at the same time the demand was slow and buyers were very indifferent about making purchases. As a matter of fact it is thought that the trade is well supplied and consequently not suffering for feed, while the larger production of flour so far this season has brought about a corresponding liberal supply of feed.

Quotations: City feed, bran, $45; middlings, $54, in 100-pound sacks; red dog, $69, nominal, in 100-pound sacks; Western spring bran, $47; standard middlings, $49; flour middlings, $57; red dog, $65, all in 100-pound sacks, 30-day shipment. Oat feed, $26.50; rye middlings, $48; white hominy feed, nominal, all in 100-pound sacks. Cottonseed oil meal, $80.50; linseed oil meal, $79, in 100-pound sacks.

Hay and Straw.—Offerings are not heavy at the different harbor points, but trade is at a complete standstill. We hear of no lower prices because of an absence of business, but, on the other hand, receivers would not hesitate to shade values in order to effect, sales, our quotations at the moment being somewhat nominal. Rye straw selling at the close at $15, and in fair demand. Oat straw steady. Wheat straw selling from boat at $13.

Hay.—No. 1 large bales, $35 ton. No. 2, $33 ton; No. 3, $31; shipping, $27@29 ton. Fancy light clover mixed, $33 ton. Clover, No. 1, mixed, $31.

Straw.—Per ton, No. 1 rye, $15; No. 1, oat, $15.

Wheat.—No. 2 red, $2.37½.

Corn.—No. 2 yellow, $1.72¾; No. 3, yellow, $1.62¾.

Oats.—No. 2 white, 88½c; No. 3 white, 87c.

Rye.—Export, $1.78¼.

Buckwheat.—Milling, $3.10 per 100-pounds.

PITTSBURGH HAY AND GRAIN

Pittsburgh, Pa., Dec. 8, 1919.

Hay.—No. 1 timothy, $31.50@32; No. 2, $29@30; No. 3, $25@26; No. 1 light mixed, $30@30.50; No. 1 clover mixed, $32@32.50. New No. 2 clover mixed, $25@28.

Straw.—Receipts are beginning to run extremely light while the demand is getting better but not urgent. Market looking higher. No. 1 oat, $14@14.50; No. 1 wheat, $13@14; No. 2, $11.75@12.25; No. 1 rye, $14.50@15.

Ear Corn.—Receipts and demand are both light, not much trading, buyers anticipating lower market. New No. 2 ear corn offered at $1.37 per bushel.

Oats.—Demand better for oats with light receipts. Trading good. No. 1 white, 88@88½; No. 2, 87½@88c; No. 3, white, 86@87c.

PHILADELPHIA DAIRY MARKET

Philadelphia, Pa., Dec. 8, 1919.

Butter.—Receipts, 1374 tubs. As usual on Saturday there was very little wholesale trading and the Produce Exchange was closed. Prices showed no important change. We quote: Fresh, solid-packed creamery, fancy, high-scoring goods, 74½@76½c, the latter for jobbing sales; extra, 73½c; extra firsts, 68@71c; firsts, 62@65c; seconds, 58@61c; thirds, 56@57c; sweet creamery, choice and fancy, 75½@77½c; do., fair to good, 64½@72½c; ladle-packed, as to quality, 50@52c; packing stock, 47@49c; fancy brands of nearby prints jobbing at 81@83c; good to choice, 70@30c; fair, 60@68.

Cheese quiet and unchanged. We quote as follows: New York, whole-milk flats, fancy, 33c; specials higher; fair to good, 32@32½c; Wisconsin, whole-milk flats, fancy, 32½@33c; fair to good, 31@32c; jobbing sales of fancy goods, 35@36c.

NEW YORK MILK MARKET

New York City, Dec. 8, 1919.

Market was flush last week but with good demand surplus almost nominal. The December rate in 200 mile zone for 3 percent milk is $3.68 per 100 lbs., about 8 cents per qt. Add 4c per 100 lbs for each one-tenth of 1 percent extra butterfat. The retail price for grade A, bottled continues at 20c per quart; grade B, 18c; loose milk, 13@14c.

Receipts of milk and cream in 40-quart cans for the week ending December 6, 1919, were as follows:

Railroad	Milk	Cream
Erie	40,732	3,568
Susquehanna	8,082	119
West Shore	10,494	1,243
Lackawanna	65,823	1,478
New York Central (long haul)	124,220	1,901
Ontario	46,120	2,023
Lehigh Valley	44,988	722
New Haven	5,240	42
Pennsylvania	11,116	404
Other Sources	6,200	175
Totals	353,015	11,675
Same week last year	334,128	9,388

U. S. TRADE BALANCE NEW WORLD RECORD

Washington, Dec. 8.—America's trade balance for the fiscal year ended June 30 was $3,978,134,947, "a figure never approched in the commerce of any nation in the history of the world," said the annual report today of the secretary of commerce. New high marks were established in both export and imports, exports totaling $7,074,011,529, and imports $3,095,876,582. Exports to Europe aggregated $4,634,816,841, to North America $1,291,932,342, to Asia $603,924,548 and to South America $400,901,601.

TOBACCO MARKET

The local tobacco market situation has been quieted somewhat after the more or less excited features of a week ago. Values are not lower, but apparently sellers have decided to ask for advances and wait until the same are forthcoming. Accordingly, buyers have retired somewhat from the scene of action and a dead calm has suddenly developed. Just when and where another storm of action will develop is not known. Apparently, it is an instance in which buyers have too freely revealed their intention to pay good prices and by so doing have developed a bullish tendency on the part of sellers. At present it would be practically impossible to buy ordinary wrapper tobacco under $20 per cwt., and most growers are holding above that price. But it should be remembered that a large percentage of the crop has been sold and generally at fair prices. Before the present calm those with good tobacco sold as high as $22 and 8 per cwt., and numerous sales were made at prices ranging from this all the way down to $15 and 6. An unfavorable feature of the situation has been the absence of export buyers who were expected to be more in evidence than usual. Apparently, these buyers have shifted their operations to other fields in an attempt to find lower prices. In Ohio, there was an attempt to decry the quality of the 1919 product and to show a discrimination in favor of the available part of the old crop. However, the facts here do not justify such reports. Seed leaf was salable at about $20 per cwt. and Spanish, which is extensively grown here was in demand at $22. It was reported that warehousing and manufacturing interests in the Miami section were greatly hindered by shortage in labor.

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We can and do pay more for your furs, because we are centrally located in the biggest fur market of the World, "NEW YORK CITY." No matter where you sell your furs, it is almost a certainty that they eventually must reach this great fur market. Merchants from all over the World come to New York to secure their furs because 90% of all the furs are dressed, dyed and manufactured in New York. Being right here in New York we are able to secure the best possible prices from manufacturers; they know we are able to furnish them with large quantities and best quality of furs of all kinds.

Don't Pay 5% For Handling

Do you realize that the extra 5% charged by many fur houses is "velvet"? There is no more justice in charging you for handling your furs than there would be in your charging them 5% for wrapping up your bundle. You know what a difference this 5% makes with the 5% additional you receive from us, when you consider the high prices of today.

The resale margin of every fur house is big enough to enable them to pay all the expenses incident to buying your furs and still leave a fair profit. Why ship to these 5% houses when you can send all your furs to George I. Fox? We do not charge 5% and in addition we quote and pay higher average prices than these other fur houses. Yes—we even go farther than this—on all bundles of over $75.00

We Pay You 5% Extra

We can afford to do this because it is much cheaper to handle a single bundle of furs valued at from $75.00 and up than it is for us to handle the same number of furs reaching us as a half-dozen bundles. We pass this saving on to you. Our old shippers have learned what this means to them in a bigger check and more money. What we want is to get acquainted with you who have never sent a shipment to George I. Fox of New York City.

THESE PRICES ARE GUARANTEED FOR DECEMBER

MUSKRAT

	Winter				Fall				Kits.		Average Price	
	E.L.	L.	M.	S.	E.L.	L.	M.	S.	L.	S.	Winter	Fall
So. N. Y.	3.65	3.00	2.25	1.50	3.25	2.60	1.90	1.15	.50	.20	2.60	2.20
No. Pa., N. J.,	3.65	3.00	2.25	1.50	3.25	2.60	1.90	1.15	.50	.20	2.60	2.20
So. Pa., C. N.J.,	3.50	2.85	2.10	1.35	3.15	2.50	1.75	1.00	.40	.20	2.50	2.10
So. N. J.	3.35	2.75	2.00	1.25	3.10	2.35	1.60	0.85	.40	.20	2.40	2.00

Black Rats, all sections, 10c. extra. Shot and damaged at value

SKUNK

	1	2	3	4
So. N. Y.	6.25	4.00	2.75	1.40
No. Pa., N. J.	6.25	4.00	2.75	1.40
So. Pa., N. J.	5.75	3.75	2.60	1.30

Scabs no value. Early caught, unprime and damaged at value

MINK

	No. 1				No. 2				
	Ex.L.	Lge.	Med.	Sml.	Lge.	Med.	Sml.	3	4
So N. Y.	13.50	11.00	9.00	7.00	8.00	6.00	4.00	1.50	0.75
No. Pa., No. N.J.	12.00	10.00	8.00	6.50	7.00	5.00	3.50	1.50	0.75
So. Pa., N. J.	10.50	8.50	6.50	5.00	5.50	4.00	2.75	1.25	0.75

Cotton and extra pale at value

RACCOON

	Ex.L.	Lge.	Med.	Sml.	Lge.	Med.	Sml.	3	4
So. N. Y.	10.00	8.00	6.00	4.00	5.50	4.00	2.50	1.50	0.75
No. Pa., N. J.	9.00	7.00	5.00	3.00	4.25	3.25	2.25	1.25	0.60
So. Pa., N. J.	8.50	6.75	4.50	2.75	4.00	3.00	2.00	1.25	0.60

RED FOX

	No. 1				No. 2				
	Ex.L.	Lge.	Med.	Sml.	Lge.	Med.	Sml.	3	4
So. N. Y.	20.00	16.00	12.00	9.00	12.00	9.00	7.00	4.00	2.00
N. J., Pa.	18.00	15.00	11.00	8.00	10.00	8.00	6.00	3.00	1.50

Damaged and rubbed at value

GREY FOX

	Ex.L.	Lge.	Med.	Sml.	Lge.	Med.	Sml.	3	4
New York	6.00	5.00	4.00	3.00	4.00	2.75	2.00	1.25	0.50
Pa., N. J.	5.50	4.50	3.50	2.50	3.50	2.50	1.75	1.25	0.50

OPOSSUM

	Ex.L.	Lge.	Med.	Sml.	Lge.	Med.	Sml.	3	4
All Sec. Lstd.	2.25	1.60	1.15	0.75	1.25	0.75	0.50	0.20	0.03

Scabs no value, damaged at value

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BOX

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For
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Next
Bundle

INSIDE STUB
FILL OUT AND PLACE INSIDE BUNDLE

FOR
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NEW YORK

NAME OF SHIPPER
POST OFFICE
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BOX
STATE

FILL OUT AND PLACE INSIDE BUNDLE

Skunk	Wolf
Raccoon	Fisher
Mink	Badger
Opossum	House Cat
Otter	Civet Cat
Red Fox	Beaver
Grey Fox	Wolverine
Muskrat	Cross Fox
Wild Cat	Silver Fox
Lynx	White Fox
Bear	Blue Fox
Marten	Weasel

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Reputation Counts in Any Business. Twenty-five years of Fur Business in New York City. Always DEPENDABLE, RELIABLE, and PROGRESSIVE. Mr. George Singer takes personal charge of each shipment of raw furs sent to George Singer Fur Co., thereby insuring each one of our shippers EXPERT handling which means TOP PRICES and JUST GRADING, Always. Get on our mailing list at once and we will keep you posted thruout the season. We pay five per cent extra on all shipments of $50 or over.

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RAW FURS

Do your furs bring you as much money as you want them to? Are you disappointed when you get your check? It will pay you to ship your full collection to me. Because of waiting orders which must be filled quickly I will pay the highest prices. Also an extra additional 5% on all shipments over $100. Check will be sent the same day shipment arrives. Send shipment now.

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SKUNK We pay highest cash prices for all staple furs—Skunk, Mink, Muskrat, Raccoon, Red Fox. Fancy furs a specialty, including Silver and Cross Fox, Fisher, Marten, etc. Est. 1870. Our continued prompt returns and liberal policy are now bringing us shipments from all North America, Alaska to Mexico. Send for free Price List. Address, M. J. JEWETT & SONS, REDWOOD, N. Y. Dept. 12

FARMS AND HOMES Where life is worth living. Moderate prices—genial climate—productive lands. For information write STATE BOARD OF AGRICULTURE, DOVER, DEL.

WANTED Farm to lease, with option buying. Eastern Penna., 10 to 25 miles market. FELIX BECK, R. 2, Hicksville, L. I.

Good Knox Co. Farms for Sale at $50 to $100 per acre. W. C. ROCKWELL, MT. VERNON, OHIO

170 A. Farm $5000
With 3 Horses, 16 Cows and

5 heifers, 3 calves, poultry, harness, wagons, sulky and walking plows, cultivators, hay loader, drill, binder, potato digger, long list other valuable implements, complete tools, quantity oats, potatoes, wheat, corn, all crops in barn. ¼-mile to town, stores, schools, other advantages, near RR. 100 acres productive tillage, 30-cow wire-fenced pasture, large apple orchard, other choice fruit. 10-room house, large basement stock barn, big horse barn, 90-ft. hay barn, 2 poultry houses, other bldgs. Aged owner to retire at once sells everything $5000, easy terms. Details offering rare opportunity in "going" farm. Details page 26 Strout's Fall Catalog Farm Bargains 23 States; copy free. E. A. STROUT FARM AGENCY, 1422 B. E., LAND TITLE BLDG., PHILADELPHIA.

EULOGY ON THE DOG

The eulogy of the dog by Senator George Graham Vest, of Missouri, uttered before a jury, in behalf of a client whose dog had been killed, has been printed no end of times; but it is like that answer of the New York Sun to the little girl who asked about Santa Claus: it never wears out. Here it is again:

"Gentlemen of the jury, the best friend a man has in this world may turn against him and become his enemy. His son or daughter that he reared with loving care may become ungrateful. Those who are nearest and dearest to us, those whom we trust with our happiness and our good name, may become traitors to their trust. The money that a man has he may lose. It flies away from him when he may need it most. A man's reputation may be sacrificed in a moment of ill-considered action. The people who are prone to fall on their knees and do us honor when success is with us may be the first to throw the stone of malice when failure settles its cloud upon our heads.

"The one absolutely unselfish friend a man may have in this selfish world, the one that never deserts him, the one that never proves ungrateful or treacherous, is the dog.

Gentlemen of the jury, a man's dog stands by him in prosperity and in poverty, in health and in sickness. He will sleep on the cold ground, where the wintry winds blow and snow drives fiercely, if only he may be near his master's side. He will kiss the hand that has no food to offer; he will lick the wounds and sores that come in encounters with the roughness of the world. He guards the sleep of his pauper master as if he were a prince. When all other friends desert he remains. When riches take wings and reputation falls to pieces he is as constant in his love as the sun in its journey thru the heavens. If fortune drives the master forth an outcast into the world, friendless and homeless, the faithful dog asks no higher privilege than that of accompanying him, to guard against danger, to fight against his enemies and, when the last scene of all comes and death takes his master in its embrace and his body is laid away in the cold ground, no matter if all other friends pursue their way, there by his graveside will the noble dog be found, his head between his paws, his eyes sad but open in alert watchfulness, faithfulness, faithful and true even to death."

The plaintiff had sought damages in the sum of $200 for the killing of the dog. After Senator Vest's speech jury deliberated two minutes and awarded him $500.

HOP GROWERS ARE HAPPY

It was predicted that prohibition would kill the hop growing industry, but the best of predictions sometimes fail in a dry time. The government reports show that 33,121,000 pounds of hops were produced in this country in 1919 against 20,193,000 pounds in 1918, yet the price rose from 20 cents a pound in December, 1918, to 56.6 cents this fall, and in New York state prices have ranged much higher.

The hop growers of Central New York had excellent crops the past season, and received returns that equalled those paid in the bonanza days of hop growing. One Oneida County grower received $15,000 cash for his 20,000-pound crop. He figures that his profit is $10,000 on this crop. Another farmer sold 23,000 pounds of hops for around $16,000, and there are quite a number who received from $5,000 to $12,000 for there crops.

England has furnished a large market for hops and they are being used in an increasing number of products in this country. While any marked increase in acreage of hops would cause an over supply and a slump in prices, it is evident that if production can be kept within a reasonable range, hop growing will be a profitable industry for some years to come. Evidence of this is found in the fact that contractors are offering to pay as high as 60 cents a pound for next season's crops.—E. E. R.

The interest in the new Allegheny County Holstein-Friesian Association has more than surpassed the expectations and predictions of some of the most optimistic members.

The Executive Committee has determined to carry out the objects of the Association to the letter and make the Pittsburgh district an active center for Holsteins.

The response to invitations to attend a Thanksgiving meeting and banquet brought in 71 enthusiastic Holstein men. Following the banquet, President Jno. A. Bell, Jr., gave a brief talk and introduced Toastmaster F. R. Babcock, who put into the meeting a spirit of enthusiasm that permeated his whole audience. His stories were unique and his introduction of the speakers brought a storm of applause thruout the meeting.

The speakers were selected to present to the members a good constructive program. Mr. E. T. Price, Business Manager of the Holstein-Friesian World, spoke on "How to Advertise Holsteins." Mr. Fred Jensen gave a talk on "How to Prepare the Holstein Cow for Official Test." Professor A. A. Borland, from State College, delivered an address on "Better Holsteins."

Among the suggestions made for the duties of the Association for the coming year include the bringing in of several cars of pure breds and community bulls. The County Agent, N. S. Grubbs, reported the introduction of ten car loads of pure breds and the organization of eight Community Bull Associations.

It is planned to conduct a bull calf sale, since the members do not care to part with the heifers.

It is expected the organization will conduct an auto excursion in the spring or summer, visiting some of the outstanding Holstein farms.—N. S. Grubbs, Old City Hall, Pittsburgh, Pa.

PEQUEA TESTING ASSOCIATION

The November record of the Lancaster County Pequea Cow-Testing Association shows the following:

Highest Cow, Reg. Holstein, 2040 lbs. milk, 69.3 lbs. butterfat, Owner, Ross Denlinger.

Second cow, Grade Holstein, 1671 lbs. milk, 45.1 lbs. butterfat, Owner, Christ Kendig.

Third cow, Grade Holstein, 1601 lbs. milk, 49.6 lbs. butterfat, Owner, Christ Kendig.

Cows in Quality List: D. B. Book, 1; Henry R. Herr, 2; H. L. Herr & Son, 1; C. H. Kendig, 4; Jacob B. Kauffman, 1; Aaron Beiler, 2; Sol J. Stollyfus, 2; Daniel Eby, 3; Ross Denlinger, 3; Ira J. Book, 1; Walter J. Herr, 4.—Henry T. Murlock, Tester.

Grumbling doesn't pay. It only makes the hard job harder.

QUALITY COUNTS

A LITTLE MORE THAN A YEAR AGO WE BUILT AT BUFFALO, N. Y., THE LARGEST AGRICULTURAL LIMESTONE MILL IN THE WORLD, WITH A DAILY CAPACITY OF 1200 TONS—TO-DAY WE ARE INCREASING THE OUTPUT OF THIS PLANT 50%. SUCH IS THE REMARKABLE GROWTH OF THE DEMAND FOR

MICHIGAN PULVERIZED LIMESTONE

STEAM CRANE FOR GETTING LIMESTONE INTO MILL

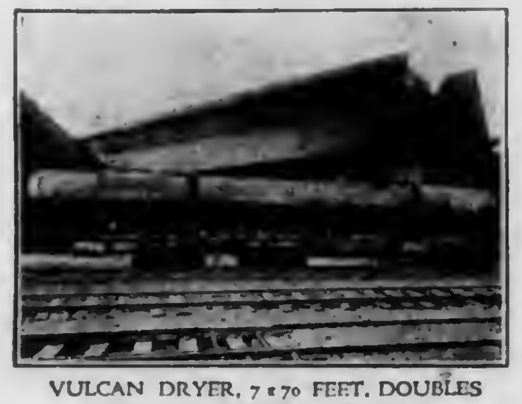
THIS WONDERFUL PROGRESS IS DUE TO A QUALITY THAT IS INCOMPARABLE, A LOW-SELLING PRICE, PROMPT AND CAREFUL SHIPMENTS, QUICK AND LASTING RESULTS IN THE SOIL, AND TO THE FACT THAT MICHIGAN LIMESTONE NOT ONLY AIDS IN UPBUILDING SOIL FERTILITY, BUT, IN DOING SO, ACTUALLY RETURNS A BIG PROFIT ON THE MONEY EXPENDED. THESE ARE SOME OF THE REASONS WHY THE CAPACITY OF THE MICHIGAN AGRICULTURAL LIMESTONE MILL MUST NOW BE INCREASED FROM 1200 TONS TO

ELECTRIC CRANE FOR MOVING STONE BACK UPON THE DOCK

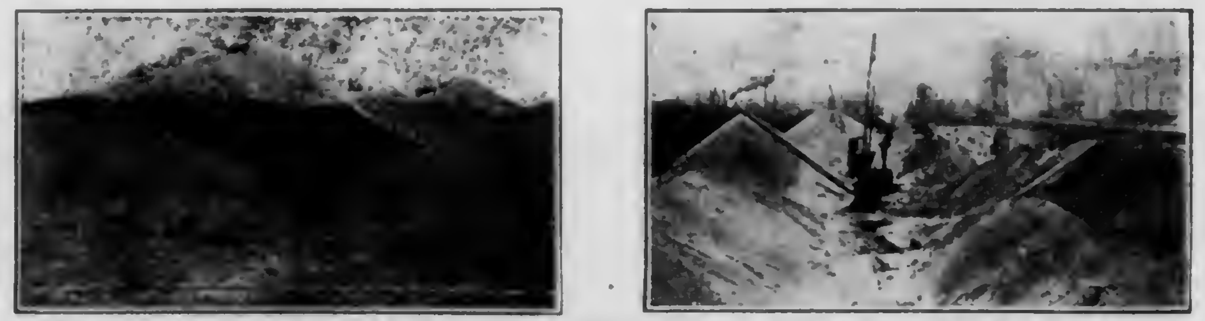
1800 TONS PER DAY

THESE ILLUSTRATIONS SHOW THE INCREASED FACILITIES FOR THE PRODUCTION OF MICHIGAN AGRICULTURAL LIMESTONE, NOW BEING INSTALLED IN OUR BUFFALO MILL AT A COST OF $75,000.

STURDEVANT PULVERIZING MILLS. CAPACITY OF EACH MILL, 300 TONS PER DAY


VULCAN DRYER, 7 x 70 FEET, DOUBLES DRYING CAPACITY OF MILL

THE TWO CRANES AT WORK


WHAT 160,000 TONS OF PURE, WASHED CALCITE LIMESTONE LOOKS LIKE ON OUR DOCK AT BUFFALO, N. Y. EVERY TON OF THIS WILL BE BUSY INCREASING FOOD CROPS BY NEXT SPRING

CALCITE BRAND
MICHIGAN LIMESTONE
OVER 99% PURE

Michigan Agricultural Limestone gives you most for your dollar. A farmer who once uses Michigan does not go back to any other limestone, or to burned or hydrated lime. Michigan Limestone gives him better results at less cost. It is a pure, soft, chalky limestone, high in lime (98%), contains about 1½% of magnesium. Acts quickly enough to give results on first crop and is lasting enough to benefit all the crops in the rotation. *May be bought thru our local agents or direct of us in carload lots.*

MICHIGAN LIMESTONE & CHEMICAL CO., INC.

LARGEST AGRICULTURAL LIME MILL IN THE WORLD. CAPACITY, 1800 TONS PER DAY

COAL AND IRON EXCHANGE, BUFFALO, N. Y.

WARNING

Do not delay buying Limestone. The car shortage problem and the fuel problem may make it difficu. to get shipments. Order soon for shipment at an early date, and avoid delays and disappointments.

MARTIN'S TANKAGE
Produces the Big Ones

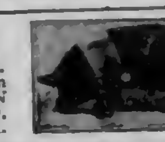
It takes just as much time to feed good, wholesome tankage as it does the poor kind. And it costs *less* in the end. You can always depend on Martin's Tankage. Only the best of meat scraps, carefully sterilized, are used. Sold with a guarantee. Write for feeding directions and prices.

D. B. MARTIN CO.
36th and Grays Ferry Ave., PHILA.

Swine

Bargain in Berkshires
In order to reduce our herd we are offering bred sows, boars ready for service, boar and sow pigs of all ages at prices that will effect a ready sale. If you wish to increase your herd or found a herd of Berkshires, we offer you an excellent opportunity. Your inquiries or visit will amply repay you. CRESTMONT FARM, Sunbury, Pa.

Fashion Herd of Big Type Poland Chinas Spring boars ready for service, fit to head well-bred herds, sired by Giant Smooth Wonder and Ohio King 2nd, out of 700 and 800 lb. sows. Also grand lot Fall pigs, same breeding. Sows being bred for spring farrow. Prices on app. C. S. Eppley, Zanesville, O.



HAMPSHIRES All ages, free circular. Reg. Guernsey Bull Calves from tested herd. LOCUST LAWN FARM, BIRD-IN-HAND. BOX 2, LANC. CO., PA.

Special Boar Sale Registered Duroc Jerseys of highest class champion blood lines. Ready for service in two sizes at $40 and $50 each, registered. BELROSE STOCK FARMS, RICHFORD, N. Y.

TARRYMOOR BERKSHIRES Quality Growthiness Prolificacy We guarantee satisfaction. Robt. E. Atkinson, Wrightstown, Pa. Bell Phone.

BOARS Reg. O. I. C. and C. W. Ready for service, two sizes at $40 and $50 each. Order direct. Guarantee satisfaction and safe delivery. JOHN L. VAN HORN, TROY, PA.

DUROCS and P. C. PIGS $30 Pair Pedigree. Not akin. S. O. WEEKS, DeGraff, Ohio.

Chester Whites Pigs for sale. Special price on boar pigs. All stock registered. ALLAN R. MORTON, ASHVILLE, N. Y.

Chester Whites. Spring boars, bred gilts, and trios from some of the best blood lines. Immuned. Also good fall pigs. C. J. Stough & Sons, R 1, Findlay, O.

Reg. Big Type SPOTTED POLAND-CHINA pigs, bred from a son of O. K.'s Pride No. 30. H. C. KYMER, R. 4, Shippensburg, Penn'a.

BERKSHIRES Superior, Epocal, Rival Champion Blood. Pigs $15 and up. O. D. BARNES, R. D. 11, Grove City, Pa.

REG. O. I. C.'S ALL AGES. Booking orders for September, October and November Pigs. BLACK DIAMOND MINORCA FARM, MT. BETHEL, PA.

BERKSHIRES AND CHESTER WHITES All ages, for sale; write your wants; we can please you. TWIN BROOK FARM, NEWVILLE, PA.

Reg. O. I. C. and C. W. Pigs. Bred gilts and sows Satisfaction and safe delivery guaranteed. JOHN L. VAN HORN, TROY, PA.

DUROC JERSEY MARCH SERVICE BOARS. July pigs. Colonial and Orion Cherry King breeding. Prices right. GEO. W. CRIM, Uhrichsville, Ohio.

REGISTERED O. I. C. Herd Boar for sale, sure breeder. Also booking orders for Aug. and Sept. Pigs. BENJ. H. RUTLEDGE, Honesdale, Pa. R. 2.

Big Type O. I. C.'s Serviceable boars. Gilts of all ages. Fall pigs. G. P. ANDREWS, DANSVILLE, MICH.

O. I. C. and CHESTER WHITE Fall Pigs and Bred Sows. Good individuals. Popular breeding. Reg. free. SPRING VALLEY FARM, MEMPHIS, N. Y.

O. I. C. Males 2 and 3 months old. Big, smooth kind. Reg. free. BRUBAKER BROS., Star R, Cocolamus, Pa.

Reg. Poland Chinas Choice Spring gilts and boars. Aug. and Sept. pigs shipped on approval. R. H. LYLE, Cadiz, Ohio.

Chester Whites Boar and Sow Pigs. Bred Sows. Collie dogs. ARCADIA FARM, BOX D, BALLY, PA.

Reg. O. I. C. Pigs for sale, 3 months old, either sex. Write your wants. A. J. Marshall, Oakland Farm, Williamsport, Pa. R. 1

Large Berkshires Registered. May farrow, also October pigs. Both sexes. Prices reasonable. C. H. TOLAND, FREEPORT, OHIO.

For Sale—1 Reg. O. I. C. Boar, 18 mos. old. 1 Reg. O. I. C. Sow, 2 yrs. old, with pig. 1 Grade Sow, 3 yrs. old, with pig. B. A. Corkran, Midlothian, Va.

Large Type Duroc Service Boars and Gilts. Aug. and Sept. pigs. Orian Cherry King Breeding. D. H. Sager, Basil, Ohio.

PENNSYLVANIA EDUCATIONAL CONGRESS

The Agricultural Education section of the Educational Congress, held at Harrisburg, November 17—22, after careful deliberation, arrived at the following conclusions:

1. The time is ripe for a reorganized rural school curriculum—a reorganization of subject matter in the present curriculum.

2. The efficiency of the present rural school system can be greatly increased thro better supervision, this to be secured by increasing the powers of the office of the county superintendent, and by furnishing to the said official adequate supervisory assistance.

3. There should be a much more definite correlation between vocational and academic subjects in the curriculum.

4. A high standard of qualifications should be set up for teachers of rural districts and an adequate salary should be paid for teachers meeting such standard.

5. The consolidation of rural schools should proceed as rapidly as possible.

6. Teachers in the rural districts to be fully effective should live in and become a part of the rural community in which they teach. The difficulty in securing boarding places for teachers in rural communities has become so pronounced that we urge school districts to build and furnish homes for the teachers, usually known as teacherages.

7. The rural community vocational school as organized in Pennsylvania, having proved itself a powerful instrument in the development of rural education, we unanimously endorse the extension of this plan as rapidly as possible, thruout the rural districts of the Commonwealth, and strongly plead for the securing of adequate financial support for this purpose.

8. A rural community vocational school should be so organized and equipped as to fulfill in the largest measure possible, the functions of a live active community center.

9. The work of the county vocational supervisor of agriculture, attached to the office of the county superintendent of schools is unanimously sanctioned. It is further recommended that this work be put into operation in as many counties of the state as the supply of qualified men will permit.

10. We believe that every effort possible should be made to carry the work of vocational agricultural education out into the districts of the open country, where such opportunities are not now afforded. We suggest that this be done thro the work of the county vocational supervisor of agriculture and local vocational teachers of agriculture thro part-time, slack-time and evening agricultural courses.

11. We heartily endorse the suggestion that the State Department of Public Instruction completely finance one or two rural community vocational schools and one or two elementary schools in different rural sections of the state, for the purpose of establishing therein new approved types of school organization and course of study.

THE LANDOWNER'S SIDE

In your issue of November 22, I read an article, "Who makes the money?"—A Tenant Farmer's side. This tenant claims the land owners are the ones making the money. Let us have both sides of the story. We will say a man owns a farm of a 150 acres. Perhaps he had a few hundred dollars to start with when he bought the farm, his wife and himself both work hard from early morning until late at night to get this farm paid for, improved, and new buildings. About this time they find themselves growing old, their health failing, help scarce and bound to work on the 8-hour system; so their only resort is to leave the farm and get a tenant.

When the owner leaves this farm it is worth from $4,000 to $6,000 perhaps. Now the tenant works it on shares and the owner furnishes, we will say, ten cows, pays all the taxes, keeps the buildings insured and repaired, buys all the grass seed and furnishes one-half of all other seed, pays half of the threshing bill, keeps the fencing in repair, and gives the tenant one-half of all the proceeds of the farm.

After paying all of his expenses out of his share, what does the owner have left for himself and wife to live on, if he has no other income? The tenant gets his house rent free, his fire wood free, his garden, his team and usualy a cow kept out of the undivided crops. All the poultry his wife wants to raise is fed off the farm, and usually they get enough eggs to pay for their groceries, but the land owner has to pay for all these things after he leaves the farm. I have had tenants on my farm for the last ten years and I have had some experience with them Now, if you should care to hear any more on the land owners side I can tell a lot more of my own experience, besides those of other land owners that I personaly know.—C. H. E. Steubin Co., N. Y.

COUNTY NOTES

Mifflin Co., Nov. 14.—Weather has been warm and wet in this part of the county; no frost to hurt anything till a week ago. Had green beans the last week in Oct. Cabbage and celery out yet. Last night it got cold and froze ice an inch thick and the ground did not thaw all day in the shade. Some corn to husk and nearly all the fodder out. Some corn spoiling in the crib. Quite a bit of thrashing to do yet. Very little ploughing done. Apples rotted very much, still selling at 40 and 45 c. a pk. Potatoes, Irish and sweet, 35c. pk.; butter 60c., eggs 60c. Butchering will take place now if the weather keeps cool. Dressed pork 16c. wholesale.—J. H. Byler.

Lebanon Co., Pa., Nov. 17.—After a week of rain we are enjoying cool, crisp autumn days. Most of the corn is husked. The fodder is still standing in the fields and will be brought in, this and next week. The wheat stand looks good. Just how good the crop will be next year, however, depends on the winter. Our local prophets are forcasting all kinds of weather this coming winter, from a mild, open wrinter to one with thirteen blizzards. County Agent Berger is kept busy this week holding corn and horticultural shows in the High Schools thruout the county. Many tobacco growers sold their crops last week. The average price paid was $11 per cwt. and the crops need not be sorted. Most of the crop in this vicinity, however, was slightly hail-cut. Some growers also sold their last year's crop of boxed tobacco at $19 and $20 per cwt. More than 4,400 hunting licenses were issued in the county so far this season, the majority of the Nimrods being farmers and farmers' sons.—Leonard F. Strickler.

Keep Pigs Thriving
during the winter and you will have extra good porkers next summer.
Keep them healthy, happy and frisky by giving

Cal-Sino

with the feed. Also give it to your sows and boars. A high grade medicinal powder without filler—not a stock food.

G. L. Martin, Harborton, Va., wrote September 20, 1918: "Three 30-lb. pigs I got three weeks ago, now weigh 50 lbs. Cal-Sino certainly keeps pigs hardy and frisky. Best I ever used."

Send 60c., $1.25 or $2.50 for trial package and name of nearest dealer. Subject to refund if you are not satisfied after at least two weeks regular use.

THE CAL-SINO CO., INC.,
Dept-H-5 Baltimore, Md.
"Just remember C-S—in the round yellow box.

BERKSHIRES
from the best blood strain as Longfellow Double and Lord Premier Successor strains, both having been grand champions. One 6 months old grandson of Longfellow Double, several servicable boars, and both bred and open gilts of the Successor strain. Also 10 weeks old pigs, sired by a son of Rival's Baron Duke 2d that weighed over 900 lbs., dam of sire being Maybelle of W. G. Several pure bred Jersey and Ayrshire bulls, 2 to 6 months old. OLD FORGE FARM, SPRING GROVE, PA., C. B. FREED, Mgr.

REGISTERED DUROC-JERSEY PIGS
$10 each while they last, all from imported Southern stock, none better. Bargains in bred gilts, service boars, brood sows and spring pigs. C. W. Ellis, Jr., Maple Lawn Farm, Cortland, N. Y.

Edgewood Hampshires, spring boars sired by our prize winning and Grand Champion boars. Make the right buy today and get a good one, either for Hampshire breeding or for a cross on your other sows. Depew Head, Edgewood Farm, Marion, O.

POLAND-CHINA PIGS
Registered Breeding Prospects, from the Big-Ben and Disher's Giant Families, that competitors do not equal. DR. KNOX, BOX 50, DANBURY, CONN.

50 REG. DUROCS AT PUBLIC SALE, MARCH 6, 1920. Herd boars, bred sows, fall gilts and boars. Get on list for catalog. SLATY RIDGE FARM, PALMYRA, PA., BOX 5.

REG. DUROCS Large size, heavy bone, best blood lines, prices reasonable, satisfaction guaranteed. JOHN W. COX & SON, New Wilmington, Pa.

GRADE PIGS
2 to 3 months old for feeders.
I. R. TANGER, YORK SPRINGS, PA.

Big Type Polands, ALL AGES. Write your wants. W. C. KEYSOR, GREENWICH, O., R. D. 2

Large Berkshire Swine Registered High Grade. Prices reasonable. Write HOME FARM, CENTER VALLEY, PA.

REGISTERED BERKSHIRE PIGS. Five litters to choose from. Six weeks old pigs $13 each. L. C. TOMKINS, Ellenton, Lyc. Co., Pa.

Durocs, all im. Yearling and Fall yearling boar and Fall boars. Fall gilts, bred for Aug., Sept. and Oct. Spring pigs, e. sex. I. D. Jackson, R. 10, V. Wert, O.

CHESHIRES.—The high-quality home-market and home-table breed. Our type pleases. Pigs and service boars. Morningside Farm, Sylvania, Pa.

CHESHIRES The best white hog on earth, 6 mo. sows and boars at $20. Bred sows at fair prices. R. D. Button, Canastota, N. Y.

Miscellaneous

HAY AND POTATOES
Poultry and all produce wanted at market prices. Good, steady, active demand. GIBBS & BRO., 325 N. FRONT STREET, PHILADELPHIA, PA.

FOR SALE 1 Jack, 8 years old, weight about 900, height about 15 hands. Guaranteed sound and sure foal getter. Will sell at a low figure. JOHN C. KOENIG, TARENTUM, PA., R. D. 1, Box 167.

30 WEANLING PONY COLTS, Shetland and larger sizes, in spotted and solid colors. 75 older ponies, 300 to 550 lbs., broken to ride and drive. Price list for stamp. SHENANGO PONY FARMS, Espyville, Pa.

For Sale 1 Shropshire and 1 Yearling Rambouillete ram. Also large ram lambs, both breeds. 6 growthy O. I. C. sows, April and May farrow. Stock reg. H. C. Beardsley, Montour Falls, N.Y.

REG. P. CHINAS, BERKSHIRES, C. WHITES, large strains, all ages, mated, not akin; 8-wk. pigs, br. sows, service boars. Beagles and Collies. Write for circ. P. F. HAMILTON, COCHRANVILLE, PA.

For Sale: Registered C. W. gilts and serviceable boars and pigs. Also Jersey Bulls, all ages. J. A. BOAK, NEW CASTLE, PA. R. 4.

REGISTERED SHROPSHIRE RAM LAMBS Some ready for light service. Price right. L. C. TOMKINS, ELLENTON, LYC. CO., PA.

Chester White Hogs, All Ages Shorthorn Bulls. R. L. MUNCE, Canonsburg, Pa.

WANTED TO BUY PENNA. AND VIRGINIA LEAF Tobacco, direct from growers. JOHN SMOLINKA, LAMBERTVILLE, N. J., R. 2.

Veterinary

Conducted by W. C. Fair, V. S.

Advice thru this department is free to our subscribers. Each communication should state history and symptoms of the case in full; also the name and address of writer. Initials only will be published. We cannot make reply by mail. This is one of the most valuable columns of the paper and we invite readers to make use of it. Clippings from this column, when properly preserved and classified, make one of the most valuable medical symposiums a farmer-stockman can obtain.

Melanosis.—I have a horse 12 years old, color white, weight 1600 lbs. that does not seem to be sick, but near root of tail anus and sheath there are several bunches which are not painful, but most of them are moveable. Lately I notice they are gradually growing larger and more numerous. What can I give him that will drive them away? —L. G., Federal, Pa. Black pigment tumors or melanosis are common in gray or white horses on the naturally black parts of the skin, therefore I am led to believe that you have a case of this kind. They are readily recognized by their inky-black color, which extends throughout the whole mass. These tumors sometimes assume a multiple form and grow large, but the only remedy is to remove them with a knife, which is simple when they are small. I might add, in exceptional cases they assume a cancerous form as they often do in man. After cutting them out apply one part iodoform and nine parts boric acid daily, and the wounds will soon heal.

Badly Infected Udder.—For the past six months one of my best cows has had udder trouble. The treatment I have given and applied has utterly failed to cure her. Now 3 of the 4 quarters are diseased. Will my drying her save these three quarters? She will come fresh April, 1920.—P. H. J., Sheffield, Pa. The writer would regard this as a suspicious case. She should be subjected to the tuberculin test to ascertain if she has tuberculosis or not. I do not believe it possible for her udder to ever again function so as to make her either desirable or profitable for dairy purposes. All things considered, perhaps she had better be fatted and sold for beef.

Eczema; Dandruff.—I have a black horse that has an itchy condition of the skin and his coat is filled with dandruff. His color is black and at times he is almost white, there is so much dandruff in his hair. He has good appetite, but not very good wind, he breathes rather short.—C. H. S., York, Pa. If you have a comfortable stabble for him, he had better be clipped, then groom him twice daily. Wash him occasionally with one part kerosene and 15 parts soap and water. Sponge him daily with one part coal-tar disinfectant and fifty parts water. Give him ½ oz. Donevan's Solution of Arsenic at dose in feed or drinking water three times a day. Avoid feeding him clover or dusty fodder, not much bulky food, but some roots. His stable should be kept clean and be well supplied with fresh air.

Capped Hock.—Since stabling my 3-year-old colt he has swelling on point of hock joint, caused by kicking stall post. He is not lame and I might add, he was all right four weeks ago. What had I better apply?—W. R. W., Beaver Falls, Pa. Dissolve 1 oz. acetate of lead in one quart of water and apply to swelling 4 or 5 time a day. After the inflammation subsides apply equal parts tincture of iodin and spirits of camphor 3 times a week. Either attach a short piece of chain to pastern, that will whip himself when he kicks, or pad stall post.

Splint.—Have a 2-year-old colt with hard bone like bunch on shin some 3 inches below knee, which I am told causes him to limp. Can it be taken off without leaving scar?—L. M. C., Middletown, Md. Doubtless your colt suffers from splint lameness. Clip off hair and apply one part red iodide mercury and eight parts fresh lard to bunch every week or ten days. Perhaps the cause is concussion, the result of running in pasture, if so it will benefit him to have rest, especially until he recovers from his lameness. Persistent friction by hand rubbing has a good effect in reducing any kind of bunch on the leg of a horse or cow.

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Woodcrest Winters Pietje Boy No. 199649, born Oct. 25, 1916. Sire—Pietje 22d Son. Dam—Lady Winters DeKil 2d, a 25.22 lb. four-year-old. Record 365 days, 818.08 lbs. butter; 18.561 lbs. milk. Write for price and pedigree. STEVENS' HOLSTEIN FARM, Cortland, N. Y.

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How Do You Do Your Chores?

The OLD Way or the JAMES Way?

The old way—cleaning out the barn is the dirtiest and hardest work on the place—a chore that is shirked by everyone who has a chance to get away from it. Loading up the old wheelbarrow—pushing it out through the barn, leaving a trail of dripping filth—across a mushy yard and up on to a manure pile, trying the strength and patience of the strongest man; afterwards loading the wagon from the pile, losing the liquid—who could like such a job?

But dirty work like this is no longer necessary on any farm.

This task, like many other tasks in the dairy barn, has been changed by James to a chore that even the boys like and which they can do as well as the strongest man.

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What a snap it is to clean the barn the modern James Way! How easy to drop the carrier to the floor, lifting the manure barely knee high to get it into the tub.

In a few moments the big tub can be loaded with more manure than half a dozen wheelbarrows can hold. Then a quick, easy run out of the barn and a jerk on the trip empties the load directly into wagon or spreader or onto the pile. And it's a clean way. The tub is practically water tight—no slopping or dripping.

A most attractive feature of this new way is that freedom from the drudgery costs you less—in actual dollars and cents—than the old way of cleaning with a wheelbarrow, or with wagon driven through the barn.

Every farmer ought to know that the old-time wheel-barrow way of cleaning the barn is the most expensive way. He knows very well it's the hardest.

The cost of wheelbarrows or the cost of modern carriers is only a fraction of the real cost.

The real expense is the time required—time for which you pay cash if your hired man does the work; or time in which you can be earning bigger profits if you do it yourself.

James Carriers

cut this time in half.

James Carriers are more strongly and heavily built than they need be. All tubs are made of 18 gauge galvanized steel built on a framework of galvanized iron, end of tub reinforced with galvanized steel plate. Well riveted, all rivets Sherardized. Perfect control clutch and brake make it possible to lower the tub quickly by its own weight—yet keeping the speed of descent under absolute control. Shaft is all cold rolled steel 1¼ inches in diameter.

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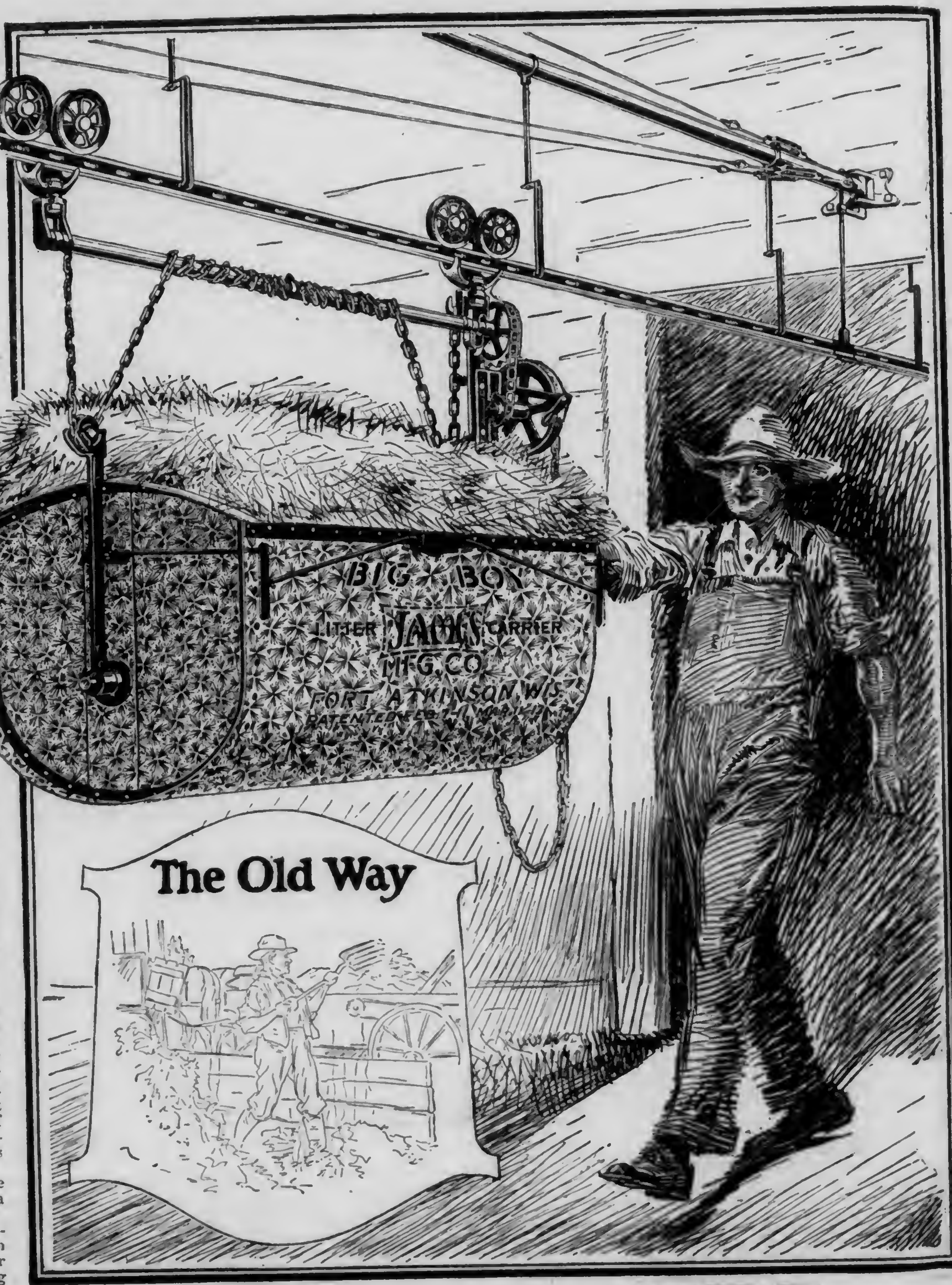
The ingenious "I-beam track" and "button-on hangers" make it easy to put up JAMES rigid track carriers—easy even for inexperienced help.



The James Way

In putting up the track, the hangers "button on"—the button of the hanger is put through the hole in the track, hanger turned to position desired and fastened to joist or ceiling. No special curves are required, because JAMES "I-beam track" is easily and quickly bent to any curve right in the barn without the use of heat.

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Such as the James drinking cups, feed and milk can carriers and trucks, cow stalls, stanchions, mangers, cow pens, bull and hog pens, ventilators, swill carriers, horse stable fixtures, hog, sheep, and beef barn equipment, are described in the book, "The Jamesway" which will be sent on request.

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of 336 pages entitled "The James Way" which will be sent on request. Please state number of cows you own. If interested in hog barn equipment ask for the "Hog Barn Book". You want more milk from your cows—you want less work—write for it today.

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PENNSYLVANIA FARMER

AGRICULTURE THE KEYSTONE OF NATIONAL PROSPERITY

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Getting What I Want Out of Life

The Hopes, Ambitions and Determinations of a Young Farmer

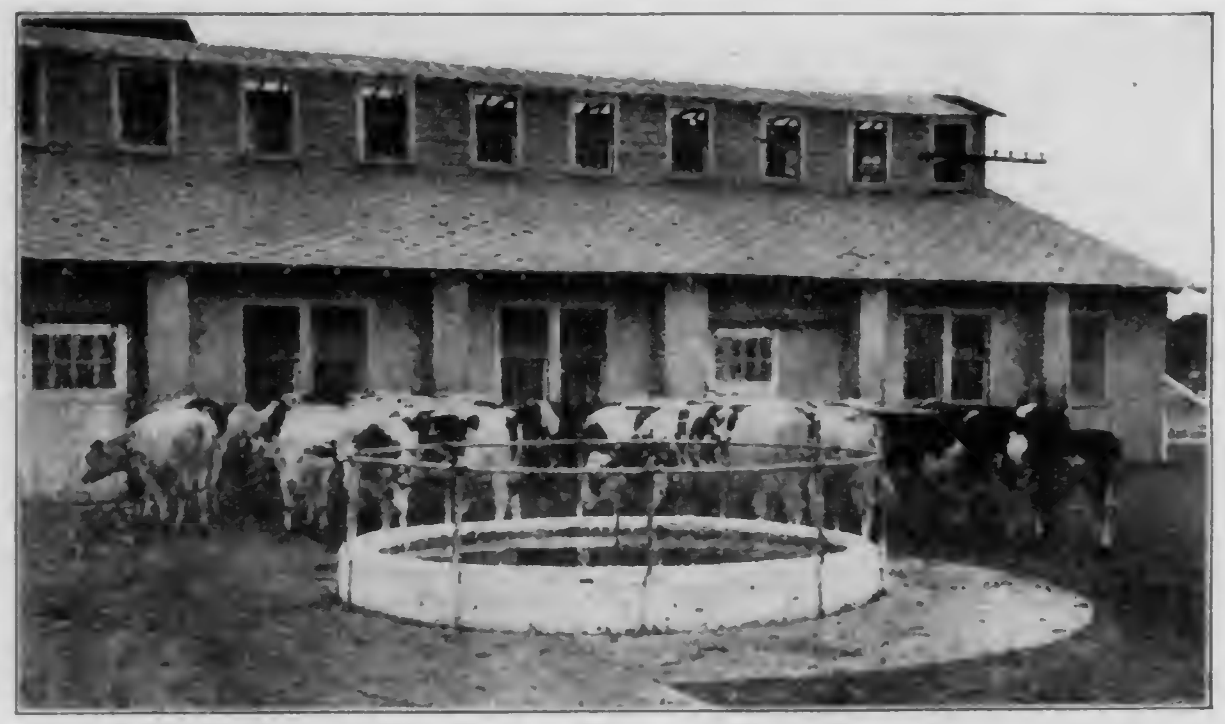
"He can who thinks he can."

Did you ever want anything so intensely that it fairly hurt? And did you ever fail to get it if you wanted it enough to pitch in and try to get it? I cannot answer for anyone but myself but, at the risk of being called an egotist, I will say I believe not. It has been my experience that if I wanted any thing to the extent that I was willing to plan, work, save and not merely wish, I generally gained it.

However, that little I have compassed in the past is as nothing compared to what I am going to achieve in the future. "He can who thinks he can." This applies to you, as well as me.

I have several aspirations but partly attained, and, towards some, I am just beginning the long, hard climb but how glorious the view when the summit is reached. And always there are higher peaks.

I have many fellow climbers among the Pennsylvania Farmer readers and how are we going to reach that summit? By helping each other along? Or by trying to pull the other fellow down? The answer is obvious.



Watering Trough at Vineland Training School

With the hope that some of my fellow strugglers along Life's Highway may get some helpful hints I am going to try to briefly describe my goal and how I hope to ultimately attain it.

A road is never so hard or so long if we have a congenial companion so along Life's Highway it is meet that one should not travel alone. Somewhere there is one to brighten your path; find Her, if you haven't already. (I have).

To reach a goal it is necessary that we know just what we hope to be our goal; therefore, it is necessary to thoroly analyze oneself and definitely determine what one wants to achieve.

Then plan, work, study, save and be happy for a definite goal and a good plan plus energy, ambition, honesty, faith and tenacity of purpose must eventually result in success. Have a motto. I have two: "He can who thinks he can," and "True happiness never comes with a $ mark attached."

Here is what I find to be my ambitions in life: to be a good citizen, a good farmer and a farm owner, an amateur photographer, a nature lover and student, and an amateur writer on such subjects as come under my observation. By amateur I have in mind the strict etymological meaning, i. e. "One who practises an art or a sport, not professionally, but for the love of it."

The daily practise of farming, however, is the means of providing food and shelter for me and mine. At present, in partnership with my father, I am a tenant farmer. We have a full set of farm implements, including a one and one-half ton truck, tractor with three plow gang and engine disc harrow, four-row sprayer and side delivery rake. We have three horses, six head of cattle and thirty-four head of swine. All paid for, excepting a slight indebtness on the truck.

I can imagine hearing someone say "its all right for that fellow to preach, for he's got his start" but the point is this: it is but a few short years ago that we were working for wages. Then came an opportunity to buy our employer's machinery and stock at inventory, and to lease the place. With a very limited amount of cash and plenty of credit we made the deal, with the result as described.

We can get a yearly lease only, and I want a lifetime lease on a farm of 150 to 200 acres, with the privilege of bequething it to my children, when I have gone on the "Great Adventure."

The farm I am now on is located in Delaware County, Pennsylvania, but the farm I shall own will be in Warren County, Ohio, midway between Cincinnati and Dayton. My reason for selecting that locality for my farm is because I lived there for a few years and I like it there better than anywhere I have ever been. I like the neighborliness of the people there. I appreciate the spirit of mutual help and co-operation. The roads are good. The soil is naturally fertile and, usually, has been well maintained. There are good markets nearby.

Livestock will be the foundation of my system of farming. Corn and hay raised will be marketed as pork and beef—Duroc-Jerseys and Shorthorns. The rotation will probably be the usual one of that region, wheat, clover, corn and truck (mainly white potatoes and sweet corn, the sweet corn for local canneries).

I want a couple of good cottages for my men, and will have all the modern improvements for the cottages as well as in my own home. I will expect my men to eventually become farm owners and will help and encourage them as whole heartedly as they help me.

To the stockman who really wants to know what progress he is making a set of platform scales is as essential as the Babcock test and weigh-sheet are to the dairyman. Most farmland can be greatly benefited by the liberal use of lime and phosphate. I believe in the judicious use of both, and the soil will respond generously to such treatment.

While my air-castle is of the future it is built of the present. In planning for the future I try to keep my finger on the pulse of the present. I am glad I am not a "solo" farmer. I am glad that circumstances have compelled me to do all the various tasks on farms of different types—truck farms, dairy farms and general farms. I can play nearly every instrument in the farm hand from a manure fork or hoe up the scale thru mowers, harvesters, milking machines, Babcock testers, trucks and tractors—and play them well. I have raised nearly every thing from onions and radishes up to calves and pigs. I spent two years at Penn. State studying my business, and regard it as time well spent, not only for the actual knowledge gained but because of the congenial friendships formed and for the broader outlook gained. These are all "stones" in the "foundation."

Credit is another important foundation stone in the erection of any business structure. Therefore I am building credit. Credit has been defined as character and is built on the stones of personal integrity, industry, economy, ability, perserverance, and acquaintance with those who can aid us with credit.

Insurance is another stone in the solid business foundation. Personal insurance and insurance on all stock, buildings, implements and stored products. Insurance may be the means of getting credit, also.

The ability to successfully handle labor is another rock in the foundation. A wise and successful business man, also a large land owner, gave me a bit of advice I have thought well worth heeding. It was written to me while I was a student at Penn. State.

He said: "The cardinal factor in farming is in the handling of labor. The things which you get at college are very useful indeed, if the acquisition of them does not make a young man undervalue those other things which are more important. A man of industry and economy, and some measure of good sense and observation, and above all, with power to handle labor successfully, will make a success of farming whether he has a college education or whether he has not."

"He can who thinks he can."

THE FEED MARKET SITUATION

A Review of the Present Conditions and Prospects for the Future

This is the first of a series of monthly letters on the feed market which we believe will be of unusual value to Dairymen and other buyers of feed in our territory. Pennsylvania Farmer is fortunate in securing a man who has exceptional experience and knowledge along this line to write these articles.—Editors.

With the winter season just opened, the market for feedstuffs is in an extraordinary position. Prices have advanced sharply, and, while not at the highest level witnessed within the past year, the market is abnormal and invites extreme cautiousness among all feeders. The present period in feed markets is usually marked by an almost general accumulation of supplies for winter requirements. But this is not particularly in evidence today, the consuming trade being disinclined to hold large stocks of feedstuffs at current price levels and face the possibility, however remote, of a readjustment to a normal basis. Purchases are therefore being made principally on a small scale.

So far as high prices are concerned, cottonseed and linseed cake and meal head the list of feed commodities. The high protein cottonseed feed is selling well above $70 a ton at the crushing plants in the South, including Oklahoma and Texas, as well as in Arkansas and other Southern territory. In some sections of the Southwest cottonseed meal of a protein content of 45 per cent. is quoted by millers up to $75 a ton. Crushers of the Northwest are making around $75 to $77 a ton for linseed meal, basis the Minneapolis market.

Heavy buying of high protein mixed feeds by dairymen of the East is an important factor in the strong tone of the cottonseed feed market. Mixed feed manufacturers are buying large quantities of cottonseed feed, they, in turn, enjoying a broad outlet for their manufactured product among dairy interests. High prices for milk and other dairy products are stimulating the consumption of the concentrates among the dairy trade. Beef animal producers, including feedlot owners and rangemen, are not buying in any great volume; in fact, their purchases have thus far been comparatively light. There is an unusually large amount of roughage in the country this year, and this, together with the heavy losses suffered by many cattle handlers the past summer, accounts for the tendency to fatten on the cheaper priced commodities. Of course, cake and meal are being used, but only sparingly.

Fertilizer manufacturers provide probably the broadest outlet for cottonseed meal, particularly the cheaper grades. Before the war, fertilizer manufacturers obtained potash in large quantities from Germany, but, with these shipments cut off, cottonseed meal is being used as a substitute. A comparatively large amount of the seed gathered from the crop this year was badly damaged by excessive rains, and it is the meal obtained from this off-grade seed that is utilized by fertilizer interests. The large manufacturers are reluctant to pay the abnormal prices demanded by mills, and strong efforts are being made to force lower values. At this writing, the fertilizer trade is holding off and it is alleged to have entered a combine to buy the meal cheaper. These activities are of interest to the feeders of the East in that the fertilizer buying yields much influence upon the general trade.

Heavy rains, aside from causing much damage to the seed, seriously delayed the movement to crushing plants. Many of the larger operators in the South are as much as six weeks behind on orders for cake and meal. Seed now is moving freely, but stocks held by crushers are light, and it is doubtful whether the crushing season will extend over a period of more than two months. Cotton production in the South, amounting to 10,696,000 bales, compared with 12,041,000 bales in 1918, was the shortest since 1909, and one of the smallest crops on record. Millers are not accumulating cake and meal, owing to the extraordinary level of prices. Where cake and meal will be available in liberal volume for next spring and summer feeding requirements is not known. The present outlook is for an early exhaustion of supplies, such as was the case in the past crop year. For this reason, little hope is held among students of the market regarding the probability of a downturn of any significance in the concentrate prices.

The position of linseed feed is somewhat similar to that of cottonseed cake and meal. Flaxseed is extremely scarce, the product selling around $5 a bushel. The production of flaxseed in the United States is estimated at 9,450,000 bushels, compared with 14,657,000 a year ago. The yield is far short of requirements of domestic plants, even importation of supplies from Argentina, Canada and the Orient aiding the situation only to a small extent. Demand for meal is limited because of the high prices at which the product is selling. There is not an important demand for cake from abroad, owing to the acute position of foreign exchange.

Cold and stormy weather has changed the market for bran and shorts. With feeders unable to utilize pastures to any great extent, consumption of the offal feed is increasing, and the trade is in a strong position. During most of November, millers of the Southwest, also of the spring wheat belt of the Northwest, which territories supply a large portion of the Eastern requirements, quoted bran around $36 a ton, sacked, basis Kansas City and Minneapolis, or around $42 to $45 a ton in the Atlantic Coast section. But an upturn occurred in the forepart of December, millers in the West advancing their prices around $4 to $5 a ton. The East is buying on a moderate scale, taking considerable feed in mixed cars with flour. Brown shorts or standard middlings in the spring wheat belt are $3 to $4 a ton above the level of bran, while gray shorts or flour middlings are holding at a premium of more than $10 above the light mill offal. In the Southwest gray shorts can be obtained around $50 a ton, basis Kansas City, with the East quoting up to $58 a ton.

Stock of bran and shorts in mill hands are believed to be large, owing to heavy production of flour and comparatively light demand for the feed from dairymen and other consumers. For this reason the trade manifests no great bullishness regarding the outlook for prices, many looking for a reaction with a moderation of temperatures. A bearish factor in the feed market is the belief that country dealers hold large stocks of the offal, bought during October and November. The present position of the market is not entirely favorable from the feeders' standpoint, and the purchase of large stocks at current price levels is inadvisable.

Demand from the East for alfalfa hay is the heaviest on record, despite the fact that the legume is selling at near record heights. In Kansas City, the largest hay market in the world, from which terminal the East draws the bulk of its alfalfa, prices range up to $36 a ton for choice, around $33 to $34.50 for No. 1, and $29 to $32.50 for standard. Much alfalfa sold to dairymen and other feeders of Pennsylvania and surrounding states represents a cost, including the freight, of more than $45 a ton, and up to $50 in extreme instances. Heavy buying of alfalfa hay by the East is the result of a short clover crop in that territory, dairymen being forced to substitute alfalfa.

Filling the Hay Barn from the Outside

Not only thru the East, but other sections of the country are buying alfalfa and other varieties of hay on a large scale. Heavy shipments are being made from Kansas, Colorado, Nebraska and other producing states of the West, to the South, Southeast and Southwest, to the North and Northeast and in the surrounding large feeding states. Until recently the movement of hay to market was restricted by a serious shortage of cars in the West, and tho shippers will complain of a scarcity of rolling equipment, alfalfa, prairie and tame hay are moving to market in large volume. Kansas City, for instance, is receiving an average of more than 1,000 cars of hay weekly, including more than 500 cars of alfalfa.

Carlots of corn, selling up to $1.50 a bushel in Chicago and other primary markets near the important growing areas, have fluctuated rather sharply in recent weeks. Generally, operators in both the cash and future market consider the present level around the average at which the coarse grain will sell during most of the crop year. A sharp decline late in December and early in January, when receipts usually are heaviest, would not be surprising. Oats are selling around 80 cents a bushel in Chicago, with the market in a strong position. Kafir and milo, the sorghum grains, used on a large scale by mixed feed manufacturers in the East, recently rose to $3 per hundredweight, owing to the extremely light movement. A sharp decline on the kafir grains is expected as soon as shipments from the Southwest reach more normal proportions, which probably will be early in January. The sorghums now command a sharp premium over corn, which should hasten the downturn —S. S.

RENTING A RUN-DOWN FARM

"A man owns a farm that is pretty badly run down he wants to furnish all seeds, fertilizers and lime, and wants me to do this work for the half.

I will use my own team and all my own machinery to do the work.

Do you think it would be right for me to haul all this lime and spread it and do the work for the half?—E. S. J., Clearfield Co., Pa.

Where a tenant rents a farm for half the grain, potatoes and hay which may be sold from the farm, and the tenant furnishes the stock and the machinery to run it, he is expected to do all the work in the way of hauling lime and spreading it, as well as applying fertilizers.

In case lime must be hauled some distance, it is a big job to do this and spread it at the right time along with other farm work.

Since lime is slower in showing its effects on soils than is fertilizer, by increased crop yields, and the growth of clover, a tenant going onto a badly run-down farm, should either have a long time lease, so that he may reap some of the rewards in better crops produced by his labor, or the landlord should pay part of the labor cost for spreading this lime.

The offer of the landlord in E. S. J's. case, to furnish all seeds, fertilizers and lime is a liberal one, but he will be the gainer in the increased crop yields as well as in the increased value of his farm should he want to sell it.

So, unless the tenant in this case is given a long-time lease, he would not be fully paid for this hauling and spreading lime.—J. N. Glover.

Making Potato Exhibits Worth While

Pointers for Those in Charge of Contests and for Judges

By E. V. HARDENBURG

DEPT, FARM CROPS, CORNELL UNIVERSITY

This is the beginning of the season during which potato contests and exhibits are held thruout the potato growing states of the Union. Many of these are used as a means of stimulating interest in potato growing among the boys and girls of our high schools. Thus far the purpose in hand is well fulfilled. However, the great majority of such exhibits as are annually held by Grangers, County fairs and even state fairs aim to stimulate competition in the exhibition of large collections of varieties. Prizes are offered for the largest collections and for the largest samples without regard to the commercial value or the relation to what is typical of the material shown.

The size and variation of such exhibits may for a time attract the eye of the untrained observer but certainly there can be very little if any lasting or practical value to them. In the past, such exhibits have been judged so that each variety was scored largely on the basis of its conformity to varietal type. Collections have been judged on the basis of number of varieties in them without regard to the commercial standing of the varieties included. Such procedure if long continued can not but tend to encourage an increase in the number of varieties grown and thereby add confusion to the already complex matter of standardizing and identifying types. Inasmuch as many of the varieties belonging to each of the classified potato groups are identical in tuber characteristics, it is perfectly possible to apply most any standard variety name to an unnamed sample so long as one uses only names of varieties belonging to the groups concerned and thereby add to the size of a variety collection.

With these facts in mind, it is not hard to see why our exhibits should be arranged so as to put the emphasis upon group or type rather than upon variety. Every sample eligible to compete should be exhibited as one of a collection of standard varieties belonging to one of the eleven potato groups. This done, each variety of a given group should compete only with every other variety exhibited in that group and be judged on the basis of its conformity to the market standard. That market standard is fairly well represented by the sample of Rural potatoes shown in figure I. Any variety which is of good handling qualities, good culinary quality and having a white skin meets our present eastern market standard. The old fashioned, elongated, deep eyed red skinned variety is no longer desirable. Nearly all varieties of the Green Mountain and Rural group are in favor in our eastern markets.

In fairness to those who may be interested in exhibiting at potato shows, the basis on which samples are to be judged, the varieties eligible to compete and some description of the type representative of each potato group should be published in advance.

Group Classification of Potato Varieties

For the benefit of greater standardization of worthy varieties and the elimination of varieties of little commercial value, potato exhibits should be so prefaced and arranged as to allow of the exhibition on only the varieties listed. Encouragement should no longer be given to the showing of large collections except for the purpose of demonstrating the type represented by each of the eleven potato groups. Following are the eleven groups with a brief dscription of and the principal standard varieties in each:

Group 1. Cobbler

Tubers:—Roughly cubical, skin creamy white, eyes rather deep and narrow, eyes medium to many, sprouts bearing pink in leaf scales, stem end often deeply recessed.

Principal Varieties:—Irish Cobbler, Eureka, Potentate.

Group 2. Triumph

Tubers:—Roughly cubical, skin dark pink, mosaic or white, eyes shallow broad and often protruding, eyes medium to many, lenticels prominent, sprouts bearing pink in leaf scales.

Principal Varieties:—Bliss Triumph or Stray Beauty, Quick Lunch or Noroton Beauty.

Group 3. Early Michigan

Tubers:—Elongated and oblong or elliptical flattened, skin white to creamy white, eyes medium to shallow, eyes many, sprouts bearing faint pink in leaf scales.

Principal Varieties:—Early Michigan, Early Puritan.

Group 4. Rose

Section 1. Tubers:—Elongated and oblong or elliptical flattened, skin pink to red, eyes many, eyes medium to deep, sprouts bearing pink in leaf scales.

Principal Varieties:—Early Rose, Early Norther, Late Rose.

Section 2. Tubers:—Short and oval flat-sprouts bearing faint pink in leaf scales.

Principal Varieties:—Spaldings Rose No. 4 or Pride of the West, King, Early Manistee, Late Mainistee.

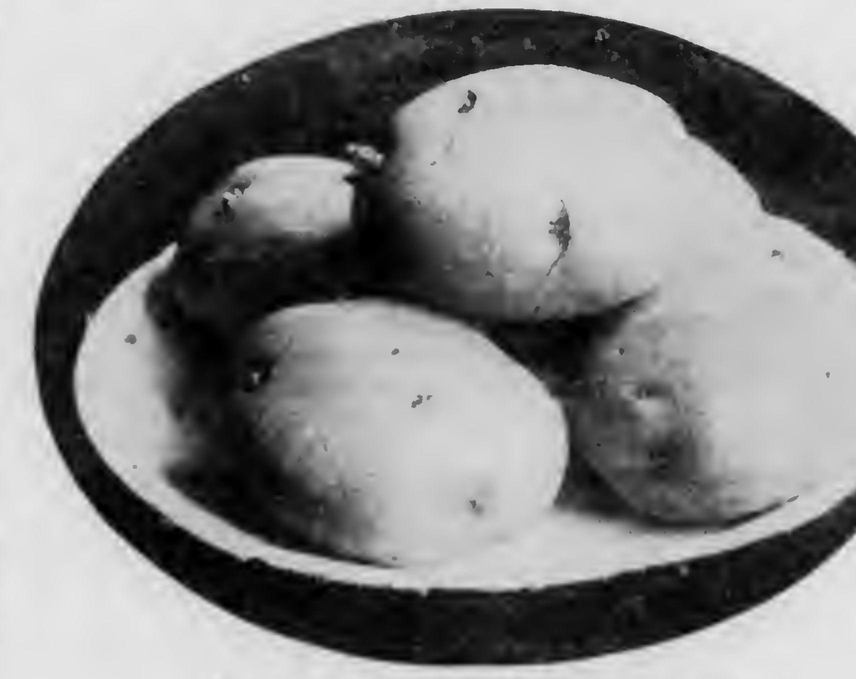


Figure 1.—An Ideal Plate Exhibit of 5 Rurals

Group 5. Early Ohio

Tubers:—Short and oval round or egg shape, skin faint pink or white, lenticels very prominent, eyes many, eyes shallow and often protruding, sprouts bearing pink in leaf scales.

Principal Varieties:—Early Ohio, Early Sixweeks, Ohio Junior, White Ohio.

Group 6. Hebron

Tubers:—Elongated and elliptical flattened, skin glossy white with faint tinges of pink, eyes many, eyes deep, sprouts bearing pink in leaf scales.

Principal Varieties:—Beauty of Hebron, Bovee, New Queen, Burpee's Extra Early, Crown Jewel.

Group 7. Burbank

Section 1. Tubers:—Elongated and oblong or elliptical round, skin entirely netted and dull gray to dull yellow, eyes many, eyes shallow and very inconspicous, sprouts bearing pink in leaf scales.

Principal Varieties:—Russet Burbank, Netted Gem, California Russet.

Section 2. Tubers:—Elongated and oblong or elliptical round, skin smooth and dull white to dull yellow, eyes many, eyes medium deep to shallow, sprouts bearing light pink in leaf scales.

Principal Varieties:—Burbank Seedling, Pride of Multnomah.

Group 8. Green Mounatin

Tubers:—Elongated and oblong flattened, skin white to dull yellow, often much netted, eyes medium depth, eyes medium in number, sprouts white.

Principal Varieties:—Green Mountain, Norcross, Gold Coin, Mill's Prize, Delaware, State of Maine, Carman No. 1, Ruloff, Worlds Fair, White Mountain, White Beauty, White Lady, Aroostook Prize.

Group 9. Rural

Section 1. Tubers:—Short and oval flattened, skin smooth and dull gray or dull yellow, eyes very few, eyes medium depth to shallow, sprouts bearing blue, violet or purple in leaf scales.

Principal Varieties:—Rural New Yorker No. 2, Sir Walter Raleigh, Carman No. 3, Number 9 or Carman No. 9, White Giant, Heavyweight, Noxall.

Section 2. Tubers:—Same as Section 1, except skin entirely netted and dull gray color.

Principal Varieties:—Dibble's Russet, Rural Russet, Late Petoskey.

Group 10. Pearl

Section 1. Tubers:—Short and oval flattened, skin dull white or dull yellow, eyes medium depth to shallow, eyes medium to few in number, sprouts bearing dark pink in leaf scales.

Principal Varieties:—Pearl, Peoples.

Section 2. Tubers:—Same as Section 1, except skin deep bluish purple.

Principal Varieties:—Blue Victor.

Group 11. Peachblow

Tubers:—Short and roughly cubical to oblong rounded, skin creamy white, splashed with pink or solid faint pink, eyes dark pink in contrast to lighter pink or absence of pink in skin, eyes medium to deep with depth greatest at bud end, eyes medium to many in number, sprouts bearing dark pink in leaf scales.

Principal Varieties:—Early Peachblow, Jersey Peachblow, McCormick, Nott's Peachblow.

Many judges make a limited use of the score card in judging exhibits. It is of course essential that the judge be familiar with group characteristics in order that only varieties of the same group or type may compete. However, the samples of each group should be judged on the basis of present market requirements. It is in this way only that potato shows will tend to educate the interested public to grow and consume potatoes of the best qualities.

How to Use the Score Card

The purpose of a score card is not so much to assist in determining the relative merit of samples on exhibition as to train the eye and mind of the observer to give attention to all and only those characters which are concerned in the market standard of excellence. In the past, much emphasis has been placed on conformity to varietal type. Such consideration is of importance only as varietal type concerns and conforms to our market requirement. A variety sample must possess sufficient varietal characteristics to definitely identify it as of the variety it is labeled. One of the best authorities on varietal type is U. S. Department of Agriculture Bulletin 176, entitled "Group Classification and Varietal Descriptions of Some American Potatoes."

A plate sample usually consists of five tubers. Any greater or less number disqualifies the entry as does also mixture within the sample. Judgement of a sample is facilitated by arranging the five tubers side by side with the stem ends all pointing in the same direction and with the tubers placed in the order of difference in size if any. The value assigned to the sample for a given character is easily deduced inasmuch as the score card percentages are given in multiples of five.

The Market Standard of Excellence

Uniformity:—Exhibit should be uniform in all physical characteristics.

(Continued on page 12.)

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VOLUME 46 NUMBER 25

Arthur J. Anderson

IT IS with the deepest regret that we announce the death of Arthur J. Anderson, editor of Pennsylvania Farmer, which occurred at his old home in Michigan on December 10th, 1919. Mr. Anderson had been ailing for some time but his trouble was not considered serious until the latter part of August.

Mr. Anderson was born near Shelby, Oceana County, Michigan, on December 3, 1878, hence was 41 years and seven days old at the time of his death. He was the youngest of a family of eight children born to Christian and Rose Anderson. The parents immigrated to this country from Norway and settled upon the farm where Arthur died, in 1866. Their's was a real pioneer life as there was but two acres cleared when they settled in their new home. Mr. Anderson was left an orphan early in his life, he being but two years old when his mother died and his father died 6 years later. Arthur then made his home with his oldest sister, Mrs. R. H. Taylor, who purchased the home place and filled the part of mother to him until he started in life for himself.

Mr. Anderson's early education was obtained in the district school of the neighborhood. After completing the course he taught two or three terms and decided to attend Michigan Agricultural College. In order to secure money for this purpose he went to work on a lake steamer with his brother Andrew, sailed the lakes for two years, and then entered the M. A. C. in 1901, graduating in the class of 1905.

His first newspaper work was done on the Detroit Tribune. This paper was sold in a short time, and he went to the Ohio Farmer in the fall of 1905 and continued with that paper until the firm purchased Pennsylvania Farmer in the fall of 1911, moving it to Philadelphia in January, 1912.

Mr. Anderson was united in marriage with Mary Tawney, of Cleveland, in 1908. His wife and two children, Elizabeth and Arthur, are left to mourn the loss of an exceptionally devoted husband and father. In his death the cause of Truth loses a champion, and mankind a friend.

In Appreciation

AS our experience with the world becomes greater, one learns to place a higher value on a friend, using the word in its true meaning and not as it is commonly mis-used as a synonym for the word acquaintance.

It has been my pleasure to depend on Arthur Anderson as a friend in this true meaning and to have proven by experience and test that this confidence and dependence has been well placed. Every day of a fourteen-year association with him, eight of these years in the closest of business and personal relationships, has increased my admiration for him.

He was singularly free from the common faults of mankind, gracious and truly companionable in his bearing, ruggedly honest and sincere, broad and sound in his vision, and with a kindly and charitable regard for his fellowmen quite out of the ordinary in one who had to make his own way against hard knocks.

I cannot say more than that he was my honest, loyal and sincere friend and that his untimely passing leaves an unfilled place.

—NEFF LAING.

EVERY one has "a host" of acquaintances. We speak of them as "good fellows," "boon companions," "kind neighbors," "enjoyable company," etc. We mean not only all this but more when we speak of one as friend. We mean one who really rejoices with us in our successes, sympathizes in our sorrow, and assists us in adversity—in fact he has the qualities of one of whom it is said, "He sticketh closer than a brother." Such an one to me was Arthur J. Anderson.

For exactly five years to a day Mr. Anderson and I worked side by side doing the editorial work on Pennsylvania Farmer. From the day on which I entered the office a beginner in this line of work, up to his last day's work on August 30, I found him the same kind, patient, honest man and friend. These qualities were so native and so pronounced as to be apparent even to the casual acquaintance. People turned to him instinctively for counsel or comfort. Much of his time was spent in serving those who came to him for aid or sympathy, for he never turned a deaf ear when service was asked of him.

Born and reared on a farm he had a sympathetic understanding of the farmer's problems, and anything that threatened the welfare or reflected upon the integrity of farmers as a class was quickly resented by him. He believed in the native virtue of the farm people and was convinced that they are the dependable, steadying influence which will safeguard our government and its institutions.

Mr. Anderson's was a deeply religious nature. He was broad in his conception of what is true religion and insistent upon its application to daily life and affairs. He had no time to give to the consideration of finely drawn theological definitions and differences, but believed that the acceptance and honest application of the principles of living as taught and exemplified by Jesus of Nazareth are sufficient to bring the Kingdom to earth and to prepare us for the future. He devoted considerable time and attention to the social and spiritual welfare of his church and was held in highest esteem by pastor and people alike. One of his best works was performed with a large class of young men in the Sunday School. This class was turned from a failure into a success by him and the young men idolized their leader. All these qualities were reflected in his home life, for never was there a more thoughtful and devoted husband or a more kindly parent. "Betty" and "Laddie" were the apples of his eye, and the guiding and training their young lives in preparation for the future was one of his greatest pleasures.

To have known such an one and to have been closely associated with him is a rare privilege. His life was an inspiration and his memory is a benediction.

—R. P. KESTER.

The Christmas Spirit

WITHOUT doubt we will have a Christmas and it will be observed, as usual, by the passing of gifts, the eating of big dinners and the passing of the season's compliments. The children will be made happy—at least for the day. Articles will be written and sermons preached on the historical significance of the day. Yet, all this may pass as a part of our experience without recognizing or remembering the purpose of the festival which is to revive and intensify the desire for Peace on Earth, Good Will to Men. Was there ever a time when the real spirit was more needed in the hearts of men than now? True, the World War is at an end. This fact made glad the hearts of mankind last year. But events since show that even that gladness had in it more of selfishness than brotherly kindness, else the present time would not be filled with universal bickerings and greed.

The real Christmas spirit is not exemplified in selfish indulgence. It is not material, but spiritual. It is not based on the desire to receive, but the willingness to share. Mankind is on the wrong track while it believes that material prosperity alone can bring highest happiness. As long as it works upon this principle, mankind will be continually at war with itself. If we will but stop and listen we may hear as did the shepherds of old, "Behold, I bring you glad tidings of great joy," which is that there will be born in our hearts the spirit of peace and the recognition of our brotherhood.

May the genuine Christmas spirit prevail to the end that our social, political and industrial turmoil may speedily subside and the world begin anew to be directed in all its relations by the spirit which was in the Prince of Peace.

Be Patient

JUST as some people have from the beginning been setting days for the end of the world in a physical way, so now we hear of prophesies made that this is the beginning of the end of orderly government. There is no more justification for the latter than there has been for the former. In spite of the superficial indications the great mass of mankind is sufficiently fixed in its ways to prevent any violent overturning of our institutions and governments. Changes may come and they should come, but there is no cause for alarm. There are men who are neither reactionaries nor radicals, who are neither satisfied with industrial autocracy nor desirous of industrial anarchy. These are quietly working away in life's laboratory towards a satisfactory solution based upon righteousness. Their voices are not heard in the discordant clamor, but their conclusions will in the end be adopted and the world will be the better for the agitation which is so alarming to many.

The Best or the Poorest

WE have received a letter from a New York farmer criticising the sentiment expressed by the writer of the article appearing on page 22 of our December 6th issue, entitled "A Pertinent Query." The farmer claims that the writer of the article is entirely wrong in saying that farm papers should publish pictures and articles showing the poor and average condition of farm homes and operations instead of the best and most desirable.

We are inclined to agree with the farmer. The purpose of a farm paper is to help raise ideals, disseminate information and inspire by word and picture to the attainment of better methods and homes. This does not mean that the publication of these things condones or excuses economic and political conditions which are unjust to farmers. Such conditions are largely the result of neglect and inactivity on the part of farmers themselves and they will be not be righted until the farmer exerts to the utmost his individual and collective strength in the business and political field. The condition and returns of laborers whom the correspondent mentions were not bettered by appeals to charity, sentiment or even justice, but wages were raised and homes improved by the united force which organized labor was able to and did exert. They had ideals and visions of better things. They went after them and got them. So it will be with farmers. They must first have the desire to have improved conditions, shorter hours, better homes and more leisure, and when the desire is strong enough they will find ways to secure them, and that way will be thru organized, united effort. Indulgence in self pity, condemnation of others, or sentimental appeals never made any permanent reforms in society.

For these reasons Pennsylvania Farmer will continue to present the better things of life and hold them as possibilities to which all may aspire not forgetting to oppose injustice at all times.

HARRISBURG LETTER

Constitutional Revision.—It commences to look at the close of the first week's sittings of the State Commission on Constitutional Amendment and Revision as tho a whole new system of organic law was going to be submitted to the Keystone State within a year or so. The deliberations of the committees into which the commission divided itself on its first day have produced so many suggestions for amendment and there have been such various proposals for corrective or remedial changes that some of the men connected with the body doubt the wisdom of submitting half a hundred propositions for alterations of the constitution each by itself. Experience has shown in this and other states that people will not vote on lists of names or questions. There are some here who are of the opinion that it was intended all along to bring about a constitutional convention and that the Revision Commission was planned to develop the matter, ascertaining sentiment and bringing men into accord. Others are of the opinion that the state administration sincerely sought light on the best method to pursue and that the promptness with which one committee brought out a series of changes in the articles dealing with the executive and legislative branches of the government was indicative of popular desires. However, reports of committees do not bind any Commission and in a few days it will go to the threshing floor and the routine and vital matters will be separated.

Method of Submission.—No commission ever named in Pennsylvania suited everyone and no expectations that the present body will please all are heard. The possibilities are that the legislature may decide to designate the commission as a constitutional convention and that it may provide for election. It is the plan of the present commission to give hearings. In any event what is recommended for change in the constitution and any new document, if the latter be deemed advisable, must go before the people to stand or fall as they elect. Constitutional elections are non-partisan. The state archives support this proposition, notwithstanding some instances adversely quoted.

The State Experimental School.—The suggestion made at the State Educational Congress here last month that the State buy or take over a typically afflicted rural school and operate it as it should be to find out what is the trouble may be adopted. It has found favor with a number of the men active in educational affairs and as rural education is closely linked with the effort to have Pennsylvania farms produce more food, which is the governor's idea, something may come of it. Illness of Dr. Thomas E. Finegan, the State Superintendent of Public Instruction, has prevented the development of his plans for improvement of the foundations of rural education. It is probable that a whole new plan of apportionment of the millions the state makes available for the common schools, as distinct from higher schools, will be urged upon the next legislature. Research work has turned up more in the last few months about conditions in rural schools than people were aware of and the plain speaking at the congress has had a tonic effect of the Department of Public Instruction.

The Institutes.—The State Agricultural authorities profess to be well satisfied with the reports on the first 2 weeks of farmers' institutes. Attendance was good in spite of weather conditions and there were spirited discussions, appreciation of the presence of men able to discuss local problems being voiced. In due season summaries of these reports will come from the "canned" publicity branch of the department. Meanwhile men who come here from counties where institutes were held will be able to tell what the future should be.

Millions For Roads.—The State Highway Department has issued some figures that are rather startling in view of the millions the state is spending on road construction. These tables are to the effect that over $14,700,000 has been voted by counties for road improvement, either in conjunction with the state or singly. There are others which are reported, upon good authority, to be preparing to submit large loans for the same purpose to their people. Not less than a dozen counties will vote on bond issues for roads before next summer. In every section it seems that immediate improvement is asked in the face of the highest labor and material prices.

Rates Going Up.—Statements filed with the Public Service Commission demonstrate that rural telephone companies are boosting rates all over the state and it may be expected that others will be moving along the same line next spring. When the readjustment comes it is going to be the hardest thing to get them down. The same is true of electric companies whose prices for current are being changed almost weekly in some sections thru turns and twists in schedules. It may be added that some of the reductions of interurban trolley fares to the nickle has been coincident with shortening of the zones wherein the aforesaid nickle pays for a ride.—Hamilton, Harrisburg, Dec. 15.

NEW YORK LETTER

Sugar For Bees Withheld.—Some weeks ago the Beekeepers' Associations of nine counties were promised sugar to feed their bees to prevent starvation, as the fall flow of honey proved to be insufficient to winter the colonies. A few counties got their pro-rata lots—but a lot of them will have to see their colonies die, because interested parties who know nothing of the case of bees brought such pressure to bear on the sugar board that further deliveries will be withheld. All sorts of misinterpretations of the plan to feed bees have been afloat and the officials concerned have been justified in their prophecy that publicity on a matter which the people do not understand can only be harmful.

Grange On State Fair Board.—The New York State Grange has not had a place on the State fair commission for 15 years. Governor Smith made a pre-election promise to the Grange that if elected he would remedy this. At the Rochester meeting of State Grange the farmers will demand that this promise be made good. The State Labor organization is also seeking a similar place, and as farmers have refused to affiliate with labor the contest is watched with interest.

Indian Problem.—New York's Indians have always been a problem to Congress. They are unlike the Western Indians in some matters of land ownership, living on lands that were always theirs, and never the white men's. Dr. Erl Bates is in Washington confering with the Indian Commission—and new laws are expected. The Carlisle Indian School may be re-opened, but will be devoted to teaching trades—not professions, to make carpenters, farmers and mechanics rather than doctors, lawyers and ministers. Dr. Bates may be chosen as its head.

State Vegetable Growers.—The New York State Vegetable Growers' Association held a two day session in Buffalo this week. Vegetable experts from the State College discussed plant diseases and fertilizer problems. The college is proving to be an indispensible factor in the vegetable interests of the state and more demands are made on the department than can be met with present equipments. Williamson, a vegetable growing center, has employed an expert for the past three years, at an expense to the growers of $3,000. In that time he saved them $34,000. The college is unable to send out enough men of this sort to meet the rapidly growing demand.

Pastor Sells Milk.—A former Syracuse pastor owns a dairy herd in Malden, Mass, and sells high-grade milk in eight quart cans for 2 cents more than other farmers get and 5 cents less than retailers charge in the same town. He says milk can be distributed at 1 cent a quart.

State Dairymen.—The 43rd annual session of the New York State Dairymen's Association has just been held in Geneva, with a record attendance. Several hundred new members joined at the meeting. The newly elected president is H. C. Troy, of Ithaca; Vice-President, H. J. Richardson, Lowville; Secretary, T. E. Tiquin, of Albany; Treasurer, R. R. Kirkland of Philadelphia, N. Y. A new board of directors was also elected.

Real Estate Men Convene.—The New York State Farm Brokers' Association held its 9th annual convention this week and an unprecedented sale of New York State farms was reported. The demand is expected to continue next year. Experienced men other than farm brokers prophecy that state farms will be no cheaper during the lives of the present generation. Good buildings seem to be the first essential in selling a farm. Some farms have been resold by western buyers at considerable profit over prices they paid.

"Pen" Bill Shrinks.—Due to prohibition the expense of running the Onondaga County penitentiary has dropped in two years from $3,000 per year to $426. County poor houses and other institutions of the sort all over the state report similar results.

Crop and Market Gossip.—Leaf tobacco is in great demand. Growers have made liberal sales. Prices up to last of November did not satisfy growers. There is much interest in seeing what effect the lifting of the wheat and wheat flour embargo on December 15 will have on prices. Flour prices have taken a big jump very recently and unstable conditions are expected for a time. Cabbage is bringing $60 a ton for No. 1 stock at car sides.—F.

NEW JERSEY NEWS

Consolidation of Rural Schools.—Consolidation of schools in rural districts in New Jersey has been steadily increasing in some counties. This statement was made by Dr. Calvin N. Kendall, State Commissioner of Education, and shows enterprise on the part of the school authorities in the farming districts who have been showing themselves fully alive to the value of education. In one large rural county about fifty one-room schools have been closed and the pupils transported to neighboring schools, or to consolidated buildings erected for the purpose. At the close of the school year, there were 709 one-room schools in New Jersey, while in 1912 the number of such schools was 869, thus indicating the progress of consolidation in seven years.

Important Dairy Meeting.—Important questions affecting milk producers in New Jersey will be considered at various dairy meetings, which will be held in Trenton during "Agricultural Week," the dates for the latter being January 13, 14, 15 and 16. Keen interest is being exhibited in these proposed gatherings both by general dairy farmers and breeders of pure-bred dairy cattle. "Marketing Day," will be conducted on Tuesday, January 13, when farmers connected with some of the most successful Farmers' Co-operative Associations in the state and country will tell what their organizations are doing in the purchase of farm supplies in a co-operative way. On the same day will be held a conference on problems confronting the dairy farmer in the marketing of his product. A representative of the Inter-State Milk Producers' Association of which more than 3,000 New Jersey dairymen are members will explain the plan adopted in the Philadelphia territory to handle the surplus milk problem, while a representative of the Dairymen's League will tell of latest developments in the co-operative plan of the league in the New York territory in which all dairymen in North New Jersey are interested. Production problems affecting the dairy farmer will be discussed at the annual meeting of the State Dairymen's Association to be held on Thursday, January 15.

Night School For Farmers in Jersey.—Farmers located in the vicinity of Hopewell in the Northern part of the State are now attending a night school, which has been opened in their interest in the high school at Hopewell under the direction of E. V. Bearer, an instructor in agriculture. The project was supported at a recent meeting conducted in Hopewell Township by H. O. Sampson, supervisor of agricultural education in the Vocational Agricultural Schools of the State; W. S. Barnhart, agricultural agent for Mercer County; George Waugh, of the Cow Testing Association of Mercer County, and other men prominently identified with moves for the better education of farmers and attaches of the farms in New Jersey.

PENNSYLVANIA STATE GRANGE

The 53d annual meeting of the Pennsylvania State Grange was held at Pittsburgh, December 9-11, with a large attendance. The usual routine of business was transacted. This is the "off year" in elections and the only offices to be filled was one each on the executive and finance committees. C. H. Dildine and W. H. Grabe were reelected, respectively.

The sixth degree was conferred upon a class of 615, and 217 were obligated in the Fifth.

Report of Treasurer Frank Willets showed the balance in the treasury to be $40,167,89. Ten thousand dollars is invested in Liberty and Victory bonds, and $700 in the Farmers and Traders Life Insurance Co.

Master McSparran addressed the meeting on the proposed temple of agriculture at Washington and urged the appropriation by the granges of the state of at least $20,000 towards the fund. A resolution appropriating the Surplus Fund of the State Grange of $3680.02 to the cause was passed. Lynn Hall reporting for the Keystone Grange Exchange reported a net gain, over expenses of $3,382.06.

Allan Miller, on behalf of the Legislative Committee, said that the obtaining of full recognition of agriculture's rights depended largely upon farmers themselves. Cooperation with the National Board of Farm Organizations was urged; the passage of the Copper-Hersman bill was recommended; opposition to the plan of government ownership of railroads was voiced; favoring prompt ratification of Peace treaty with moderate reservations; in favor of maintaining the system of graduated income and excess profits tax. The committee still favors the "little red school house" and is not convinced that the consolidated high is to be recommended.

The committee on dormant granges deprecated the large number of dormant granges and recommended that strong efforts be made to find the cause and a remedy.

PENNSYLVANIA CROP REPORT

Fred Rasmussen, Secretary of Agriculture, reports crop production as collected and compiled by the Bureau of Statistics, as follows:

Corn.—Pennsylvania's corn crop this year excels all previous years. Conditions were favorable during the growing season and as the season advanced the prospect improved, until the farmers of this state have harvested a crop which is conservatively estimated at 72,369,480 bushels. This is an average of 45.9 bushels per acre. The crop has been harvested without damage by frost. Owing to the extremely wet weather, that has prevailed during the past month, there has been some complaint of damage to the corn, both in the shock and crib, as well as the fodder by mold. The crop last year was estimated at 63,597,435 bushels, and in 1917, at 65,260,885 bushels.

Buckwheat.—Over one-third the buckwheat produced in United States is grown in Pennsylvania. Growing conditions were favorable this year and the crop produced is larger than forecasted any time during the growing season. The yield is estimated at 21.6 bushels per acre and the total 6,826,730 bushels. The crop last year was estimated at 6,191,000 bushels and two years ago at 5,570,000 bushels.

Potatoes.—The outlook for potatoes was not good during the growing season, due to blight and bugs and other plant diseases and insect pests as well as unfavorable weather conditions during the early summer, yet it is encouraging to report that the crop is now estimated at 28,556,220 bushels, which is an average of 100 bushels per acre. The crop last year was estimated at 24,733,200 bushels and in 1917 at 30,653,200 bushels.

Tobacco.—The yield of tobacco is estimated at 1,310 pounds per acre and the total production at 49,583,500 pounds. Weather conditions in Lancaster and York counties, where approximately nine-tenths of the tobacco is grown, were not very favorable, and insects had their detrimental effect. The crop in the northern counties was very good but the acreage is not large. The crop last year was estimated at 58,007,400 pounds, and 2 years ago at 51,051,000 lbs.

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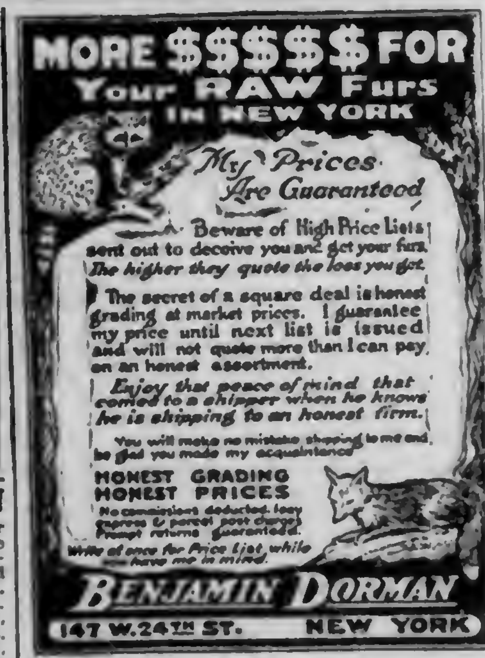

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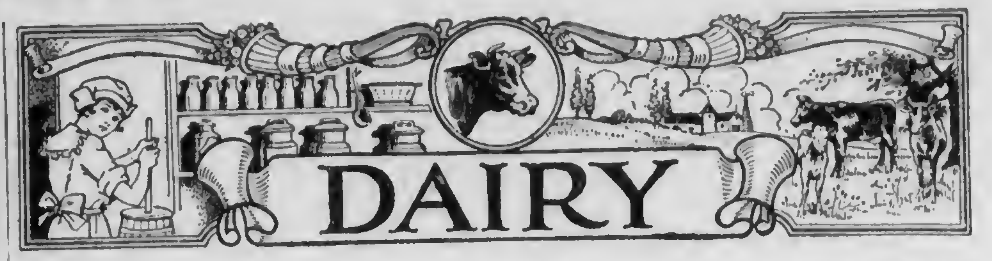


DAIRY

Annual Meeting of Inter-State Milk Producers' Association

"The most wonderful conference of farmers I have ever attended. Never before have I seen a harmonious gathering where milk producers, dealers and consumers met to discuss the problems of the dairy industry."

Thus was the annual meeting of the Inter-State Milk Producers' Association, which met in Philadelphia December 1st and 2nd described by our side guests, who came to see how the producers and dealers of Philadelphia managed to sell milk cheaper than almost any large city in the east. Among these guests was a delegate from the New York Board of Health who was present to represent the governor and the mayor of New York.

The meeting was the most ambitious ever undertaken by the association, and was composed of four sessions, besides an evening banquet, and an early morning trip to two of the city milk platforms. All of these were open to the public except the business meeting for the election of officers, and to one the city milk consumers were especially invited. All of the sessions were characterized by a cordial spirit of harmony and co-operation. The Philadelphia milk dealers took an active part, attending with interest and enthusiasm even to a technical discussion on dairy feeding.

Two of the large pasteurizing plants nearest the railroad platforms (Harbison's near Third and Berks Street depot, and the Abbott Dairy near 32nd Street) were thrown open to the association and parties were escorted thru, giving the milk producers a chance to see what happens to the milk in the city, and that the milk dealer had also his problems and is entitled to some consideration.

The election resulted in several changes in the board of 18 directors. Those to serve for the following year being: F. P. Willits, Ward, Pa.; H. D. Allabach, Trappe, Pa. Frederick Shangle, Trenton, N. J.; Frank O. Ware, Deerfield Street, N. J.; John H. Bennetch, Sheridan, Pa.; A. B. Waddington, Woodstown, N. J.; W. B. Cowperthaite, Medford, N. J.; E. Nelson James, Rising Sun, Md.; Henry I. Laurer, Mifflin, Pa.; Granville F. Frey, Sinking Springs, Pa.; Ivo V. Otto, Carlisle, Pa.; Robert F. Brinton, West Chester, Pa.; E. H. Donovan, Brenford, Del.; Frank M. Twining, Pineville, Pa.; R. I. Tussey, Hollidaysburg, Pa.; E. R. Pennington, Kennedysville, Md.; R. R. Spring, Easton, Md.; Ira J. Book, Strasburg, Pa.

The directors named the officers as follows: President, Frank P. Willits; Vice-President, H. D. Allabach; Secretary, Robert W. Balderston, Kennett Square, Pa.; Treasurer, Frederick Shangle. The executive committee is composed of the officers and A. B. Waddington, and Robert F. Brinton.

The Secretary, Mr. Balderston, was granted a six months leave of absence to accept an appointment with the American Friends Service Committee to assist with reconstruction work in Germany, the Society of Friends haing been asked by Herbert Hoover to take exclusive charge of the feeding of the starving German children this winter.

The association considered that it had been peculiarly honored by having its secretary chosen to be one of a unit of 25 men who have been selected from all parts of the United States because of special knowledge of food, and for organizing ability. In Mr. Balderston's absence the work of the office secretary will be assumed by Mr. Allabach, others of the executive committee offering likewise to assist with dividing the labors of the field work.

The new plan for selling milk, described in detail in a previous issue of the Pennsylvania Farmer, was thoroly discussed at the business meeting and met with general approval. The most serious objection came from some of the sections in Western Pennsylvania, and along the Eastern Shore of Maryland, districts that have made in the past a larger proportion of summer milk than winter milk. Mr. Balderston exhibited a chart which showed the amounts of milk shipped from each railroad district, and told in graphic from just where and when the peak of production came. From some stations the June shipments were twice as heavy as during the winter months, a fact which materially help to pull down the average yearly price of milk to the producers in general, Mr. Balderston declared.

A number of specific instances were given where the association had been able to straighten out local tangles on the milk question, to the distinct benefit of the dairymen of that neighborhood. At Pottsville, Pa., there were three scales of milk prices to the farmers. After several conferences with the dealers, the Philadelphia basis was established, to the general satisfaction of both dealers and producers.

At a large condensing plant the association found that the tester had for two months been reading fat test wrongly, resulting in a loss of 8 cents per hundred pounds of milk to every milk shipper to that plant. After a conference with the management the association was able to secure an agreement that the loss would be returned to each individual producer affected.

At Bethlehem, Pa., there was no organization of dealers or farmers, and consequently no uniformity of prices. The association established a strong local in that section, resulting in better prices to all dairymen.

One session was devoted to consumer's milk problems, and special invitations were sent to all women's clubs and domestic science organizations of Philadelphia and neighboring towns to send delegates for a round table discussion. The response was most worth while, representatives coming even from neighboring states. Addresses were given by Alva Agee, secretary of agriculture of New Jersey, and Dr. Clyde L. King, milk arbitrator for Pennsylvania with short remarks from several of the Philadelphia dealers.

It was estimated that 500 members attended the business session and 300 remained for the evening banquet. The experiment of a two-day session was considered a great success, and decidedly valuable from both a social and a business standpoint. The officers are already planning for next year's meeting and hope to add several improvements, among which will be special arrangements for the entertainment of the wives and daughters of the members.
—E. T. Brinton, Publicity Dept.

DAIRY NOTES

It is of interest to note the activities of the fair price milk committee in New York City, tho hard to see any results from their work. With the slight increase to farmers in December, New York dealers have advanced the retail price again much more than the wholesale advance.

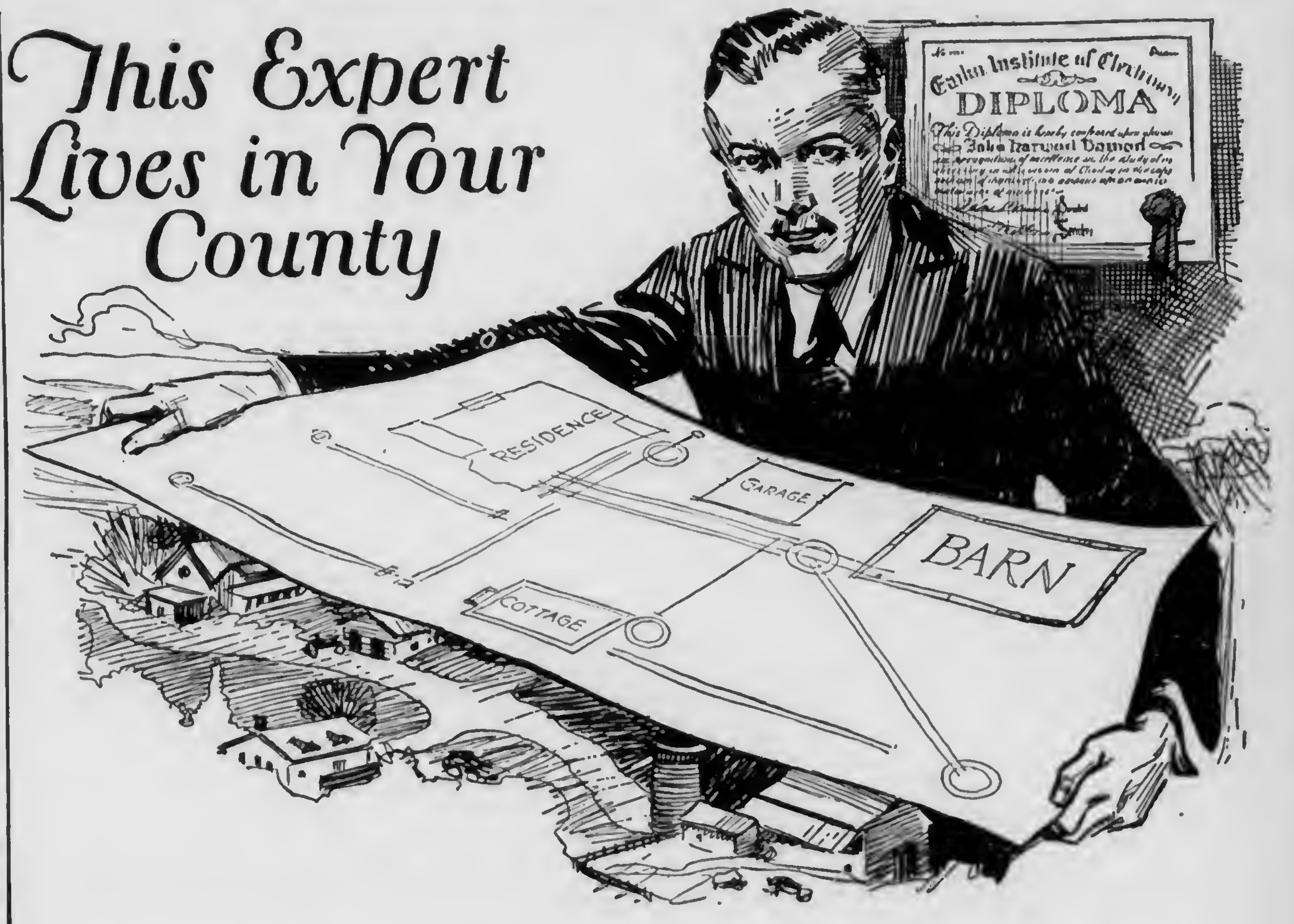
One firm announces that milk, butter and cheese have reached the highest point of the winter. One firm was selling milk in East side stores at 16½ cents a quart in November, not delivered, and the food administrator has succeeded in getting this firm to cut this price ½ cent in December, instead of advancing it as an experiment. This firm sells 6,500 quarts a day, and agrees if the reduction brings a loss that it will open its books to the public accountants at the end of the month. A 5 cent deposit on each bottle is required to insure its return. The Borden company retails milk at 18 cents a quart thruout the month.

This company claims that milk production has increased and that the demand for it has decreased. This latter is easy to believe at present retail prices, but we believe the company is exceptional when it reports that it is purchasing milk from about 10,500 plants, which show an average increase of milk per dairy during the past six month of 30 pounds. This is a total increase of 315,000 pounds. They claim their sales decreased 100,000 pounds in that time, or a surplus of 415,000 pounds.

Sometime ago the Borden's purchased 36 plants of the Central Dairy Company. At that time the output of those plants was 2,900 cans. Today, they are receiving 3,000 cans from only 22 of these stations. One reason for the decrease in the use of milk in cities is the use of milk substitutes such as Hebe Milk. One restaurant in a small eastern city just ordered 15 cases of Hebe Milk, from which the cream has been removed, and replaced by cocoanut oil. Of course the vitamines which are such a vital part of milk's make up are deficient in this substitute.

A discouraging feature of the dairy outlook is the closing out of several up-state cheese and butter factories. These are bought by big milk firms and after a little they are closed, at a great sacrifice to the communities which are usually far from the railroad.

There will be a large number of milk bills introduced in the new legislature. As a basis for some of these, milk hearings will be held not only in New York City but in up-state cities, beginning in Buffalo, December 11. Following this, hearings will be held to obtain data of costs in Syracuse, Utica, Rochester and probably Albany and Binghamton.



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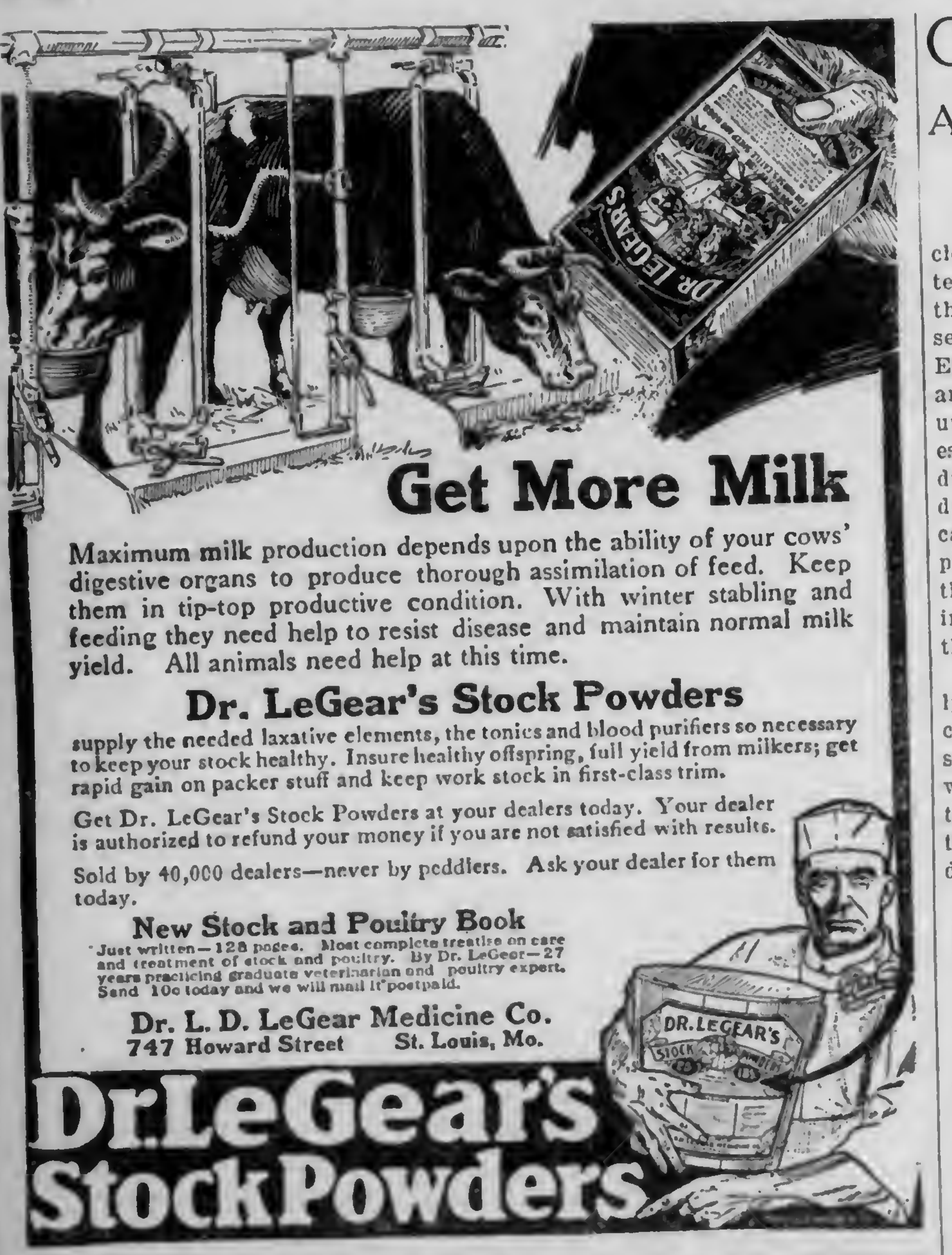
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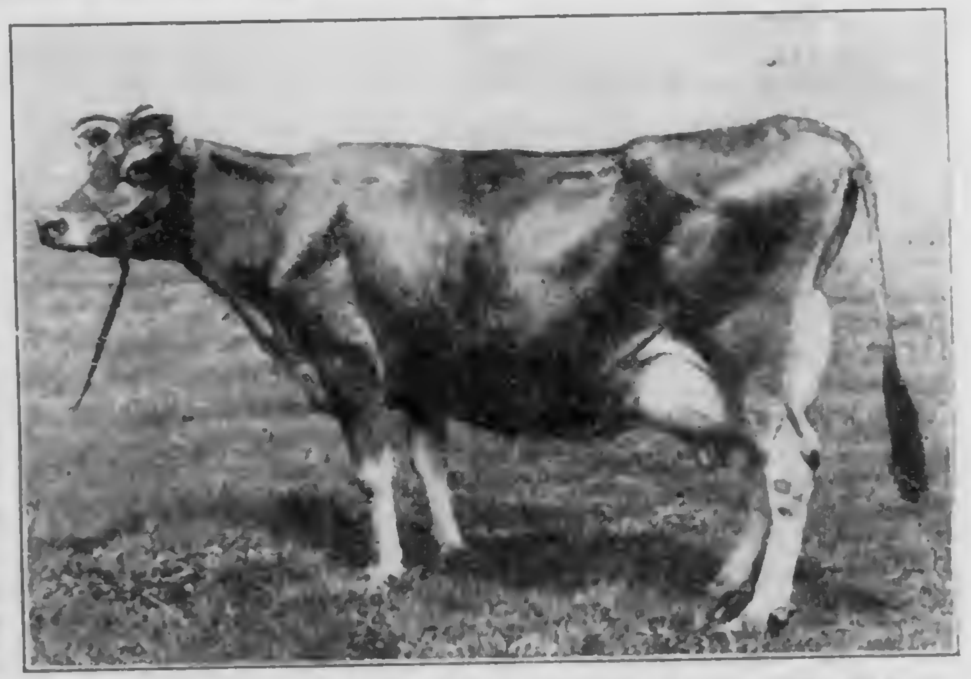
Outlook for American Dairy Farmer

Address of Secretary of Agriculture Rasmussen Before the Tri-State Association Meeting

The world war has brought a closer relationship and a greater interdependence of all the nations of the earth; not a relation based upon sentiment, but based upon trade. Every industry in this country of any consequence must today be measured by a world measure. This is especially true in regard to the products of the necessities of life. In discussing the outlook of the American dairy farmer it is, therefore, important to take into consideration the conditions of the dairy industry in all parts of the world as well as the markets for dairy products.

The fundamental principles underlying the development and the success of the dairy industry are the same now as they were before the war. The uncertainty in the industry comes from the change in relation and the proportion of different dairy products manufactured, the great changes in our import and export and the very rapid increase in the cost of producing and distributing milk and other dairy products.


"Jap's Manilla Garfield." Official Record. 17,234.5 lbs. Milk, 941 lbs. Fat at Age of 9 Years, 9 Months. Owned by Meridale Farms, N. Y.

Imports and Exports of Dairy Products

Immediately preceding the war importation of dairy products, such as cheese, butter and condensed milk, was rapidly increasing. Butter from Argentine and New Zealand were trying to establish a market on the Pacific Coast, and butter from Denmark and Holland on the Atlantic Coast; in fact, dairy products were received in the United States from twenty-four different countries. The imported was about equal to the amount exported.

During 1914 the United States exported 16,219,082 pounds of condensed milk, an excess of exports over imports of 1,257,996. During 1919 the export had increased to 728,740,509 pounds of condensed milk, an excess of export over import of 708,556,786 pounds.

During 1914 the United States exported 2,427,577 pounds of cheese. The excess of imports over exports during that year was 62,069,893 pounds. In 1919 the exports exceeded the imports by 16,352, 547 pounds.

During 1914 the United States exported 3,693,597 pounds of butter the excess of imports over exports being 4,094,793 pounds. During 1919 the export of butter from the United States was 33,739,960 pounds an excess of exports over imports of 29,608,491 pounds.

These figures clearly show the great change there has been in the imports and exports of dairy products from this country. During the war the importation into this country from Europe stopped completely, (1) because of the decrease in dairy cattle in Europe, (2) the decrease in grain shipped to Europe, (3) and the decrease in production per cow generally thro Europe, not only because of the lack of feed shipped from other countries but because a great deal of home grown grain formerly fed to cattle had to be used for human consumption. The result was that the United States not only was relieved of the pressure of foreign competition which in 1914 was receiving the serious thought of dairy manufacturers in this country, but new markets became available which for a time had but one limitation, that of ships. The dairy manufacturers of this country were quick to adjust themselves to the needs of the new markets by establishing numerous factories for the manufacture of condensed milk and milk products.

In order to get an idea of how soon the dairy industry of Europe will return to pre-war conditions it will be necessary to answer the following questions:

1st. To what extent have the dairy cattle been reduced?

2nd. To what degree will Europe again be a purchaser of grain and concentrates to be manufactured into milk?

3rd. How will the cost of producing and manufacturing dairy products in Europe compare with the cost of production and manufacture in other countries?

4th. What will be the purchasing power of the consuming public?

Decrease in Dairy Cattle in Europe

The decrease in the number of cattle during the war does not appear to be as great as was generally supposed. Figures compiled by the Dairy Division of the U. S. Department of Agriculture show that the number of cattle in the following nine countries, United Kingdom, France, Italy, Switzerland, Belgium, Netherlands, Denmark, Sweden, Germany, decreased from 65,205,000 before the war to 58,163,000 after the war, a total of 7,042,000, or 10.8 per cent. Five countries, United States, Canada, Argentina, Australia and New Zealand, increased the number of cattle from 102,757,000 before the war to 118,895,000 after the war, an increase of 16,138,000, or 15.7 per cent. The total gain in the fourteen countries is 9,096,000 head. Statistics are not available for Russia, Austria Hungary and the Balkans. If the entire world was considered it is probable that the total number of cattle in the world today is approximately what it was at the beginning of the war.

Export of High Protein Feed.

The greatest reduction in the quantity of milk produced in Europe did not come from the reduction in the cattle as much as from a shortage of feed. Before the war Europe imported great quantities of feed for the production of milk and other livestock products, not only from the United States but also from other grain producing countries, especially South America. During the war this supply was entirely shut off; in addition, great quantities of home grown grain formerly fed to cattle had to be used for human consumption.

Reports published by the United States Department of Commerce for the first eight months of 1912 show that the United States exported 591,219 tons of high protein concentrates, such as oil cake and linseed cake and other protein feeds, valued at $17,439,624. In 1918, only 16,822 tons valued at $881,429 were exported. In 1919, 317,825 tons, valued at $19,203,327 were exported. These figures clearly show how the export of protein feeds almost became negligible during the war and how rapidly it has returned to pre-war quantities in spite of the great increase in cost.

Cost of Producing Milk in Europe and in the United States

The dairy farmers of Europe preceding the war were able to purchase concentrates in this country, pay the freight to Europe, convert the concentrates into dairy products, pay the freight rate on the dairy products back to the United States and meet the competition of the American farmer in his own market. The principal reasons were that cost of producing milk in Europe was less than in the United States owing to the higher production per cow, the cheaper labor and the very cheap European freight rates. The average production of milk in the leading dairy countries in Europe is between 6,000 and 7,000 pounds of milk per cow, while the average production in the United States is probably between 4,000 and 5,000 pounds of milk per cow. Wages have advanced more in proportion in some of the European countries than have wages in this country. Ocean freight rates have increased enormously.

The dairy industry in some of the leading countries in Europe, like Denmark, Holland and Switzerland, has developed on imported grains and concentrates. Demark, one-third the area of Pennsylvania, normally imports over one million tons of grains and feedstuffs. If the rate of exchange is high, the price of grain high, and the freight rates high, the cost of production in those countries importing grain will be very much increased. Just to what extent it will influence the cost of production can not be estimated. At any rate it does not look as if it would be possible for the dairy countries of Europe to meet the competition in our own markets the same as before the war.

The Price of Milk

Before the war there was not a section in this country producing milk for direct consumption receiving a price for milk which returned to the farmer interest on his investment and a wage equal to the lowest wages paid in any industry. In the territories supplying milk to Boston, New York and Chicago the condition had reached a point where, in order to save their industries from financial ruin, the only means by which the farmers were able to force the milk distributor to raise the price of milk was by withholding the milk from the market.

During the early part of the war milk did not increase in price in proportion to the increased cost of production. Not until the selling of cows in large numbers, particularly in the dairy sections of the East, aroused public alarms, did the price of milk advance to meet the increased cost. Investigations in the cost of producing milk in all parts of the country clearly showed that in order to maintain production it was necessary materially to increase the price of milk. In spite of a substantial increase, the price of milk during the war was below the general price level of other agricultural products.

Studies in the cost of producing milk have been carried on in all parts of the country. Some people argue that cost studies are of no value because the cost varies on different farms and that costs do not determine the selling price. Others argue that the producer is entitled always to get cost of production plus profit. The fact is that neither of these two views are always applicable. Cost studies of agricultural products are of value because they lead to a detailed study of the business and promote efficiency. The selling price has a very definite relation to the cost of production. Not that it is possible at all times to receive cost of production, but over a longer period losses will be compensated for with profits or the industry will gradually decline.

Owing to the fact that milk on the one hand is sold as a raw material for manufacture, and on the other hand as a finished marketable product, there will alawys be a definite relation between the price of market milk and the price of butter, cheese, condensed milk and ice cream. It is estimated that 43 per cent. of the total milk supply of this country is used in manufacture. To illustrate: Boston receives its milk supply from the New England States and from Quebec. 55 per cent of the total milk supply of Boston comes from Vermont. The 55 per cent of Boston's milk supply is only 12 per cent of Vermont's milk supply.

It is not what it costs to produce milk in Massachusetts and New Hampshire which is the main factor in determining the price the farmers in those States will receive for the milk. The main factor is the price to the farmers in territories in Vermont where butter and and cheese is manufactured. As soon as the price of milk sold for direct consumption becomes too high in proportion to the price of milk sold for manufacture, the latter will invariably find its way into the city market and lower the price; in other words, that portion of the 88 per cent of Vermont's milk supply now manufactured into butter and cheese becomes one of the principal factors in determining the price which the Massachusetts and the New Hampshire farmer will receive for the milk.

(To be continued next week.)

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Cows should be clipped on udders, flanks and underline every month during the winter and early spring. These parts may then be easily and thoroughly cleaned before milking, preventing milk contamination from dropping filth.

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We clip our cows at least once each month. By clipping the flanks, udders and rear portion of the cow, it is possible to groom and wash the dirt from the cow, which would be very difficult to do if the hair is allowed to grow.
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the milk truck always takes a full load. As soon as disease creeps in the milk yield will show it. Cows that do not milk as they should are usually suffering from a run-down condition of the vital organs of production. Medical treatment is needed to restore health and vigor.

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Send for free treatise on cow diseases, "THE HOME COW DOCTOR"
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SHIPPERS DISSATISFIED WITH ICING SYSTEM

That shippers of fruits and vegetables have cause for their opposition to the present system of icing refrigerator cars was proved very emphatically at the recent hearing held in Chicago before the Interstate Commerce Commission on the proposed Perishable Protective Tariff No. 1. This tariff relates to certain fixed charges for icing refrigerator cars to be made by the United States Railroad Administration.

Samuel Fraser of the Associated Fruit and Vegetable Industries of New York, who is leading the opposition to the proposed tariff in the Eastern States, says it proposes to take the shipper's money, but in no single case does it give any statement of what it expects to do for the shipper. In this tariff the railroad not only promises to do nothing, but it seeks to absolve itself from all responsibility in regard to possible decay or possible loss thru deterioration of the commodity transported.

In behalf of the shippers, R. G. Phillips, of Rochester, N. Y., secretary of the International Apple Shippers' Association, filed a statement showing the character of the insulation, size of car and bunker capacity of 85,000 refrigerator cars now in use.

The railroads seek to base their charges on an initial icing of five tons. The evidence filed shows that there are cars which will not hold one ton of ice, a great many which will not hold more than 2½ tons, some which will hold five tons and some which will hold six. To charge all men alike, whether they get two tons of ice, or six, would certainly be unjust.

It was shown that a great many of the refrigerator cars are no better than box cars. Yet it is for cars of this type that the railroads propose to charge the shipper the sum of $5 per trip because of the extra value of the equipment; and just recently when shippers in Arkansas and California, where stated charges are in effect, wanted to use refrigerator cars for shipping commodities under ventilation they were informed that they could not have a refrigerator car unless they paid for the ice, so that instead of securing a refrigerator car for $5 the railroads insisted that they pay the regular full icing charge, whether the commodity needed ice or not.

The railroads argue that the character of the equipment is not germane. If it is possible for them to establish this point, then we have a situation like this: The cantaloupe shippers in California cannot harvest the melons until they are passed upon by an inspector of the state, who certifies that they have reached a satisfactory state of maturity. We then have a standardized product. Then standardized products are packed in standard packages. They are loaded into refrigerator cars which may be good or worthless for transporting the melons and they are shipped under stated charges, for the icing charge is fixed at so much per car from California. We have standardization everywhere except the character of the equipment of the railroads.

For years the railroads have known, and the United States Railroad Administration has known ever since its inception, that this equipment was incapable of transporting the commodities put into it, and yet when it comes to an issue we have the spectacle of the United States Railroad Administration fighting the growers and shippers and seeking to contend that the character of the equipment is not germane to the issue, after they had filed a statement showing that one reason for the increase in these charges is the large amount of damage which occurs in the transportation of these commodities.

Well Grown and Well Graded Carrots Are Profitable

This tariff is built upon the amount of ice used. The railroads have sought to show that they use so much ice and that it was the main item in the construction of the tariff From time to time, however, the growers and shippers have sent word to their witnesses that they were satisfied that they were not getting the ice they paid for. Accordingly the Interstate Commerce Commission investigated this matter, and found that in many cases the railroad charged for 20 percent more ice than it put into the cars.

In one instance a car loaded with peaches was charged with 1200 pounds of ice. The actual amount put in was 600 pounds. At a public hearing in Rochester it was shown that at Charlotte, an important transfer point for Western New York fruit, the railroad officials did not know whether the cars were iced or re-iced; that if the men wanted to re-ice them they did so, and if they did not feel like it they did not; but the shipper paid for it just the same.

This icing of refrigerator cars is a serious problem with fruit and vegetable growers. After having cultivated and sprayed and given their crops the best possible care, and then to have them badly damaged or ruined in transit because of the carelessness of the trainmen is little short of a crime. The shipper's plea is that he shall have better icing service, and be permitted to pay for the service rendered, and that he shall be left free to secure the service where it can be most economically performed.—E. E. R.

WINNERS IN FRUIT SHOW

State College, Pa.—A large exhibit of fruit, flowers and vegetables was displayed here in the Horticultural Building on Pennsylvania Day. C. F. Lohry, of Beaver, took six first prizes on plates of apples and three second prizes. East End Fruit Farm, Hummelstown, was first on one plate and on the bushel basket of apples. Four first prizes and two seconds went to C. D. Cary, of Oxford. Those receiving two first prizes were Alder Run Orchard, Tyrone, and D. H. Myers & Son, Annville. Edward Mairs; Buffalo Valley Fruit Farm, Mifflinburg; Arnold Brothers, Beaver Falls; A. W. Cowell, State College; and J. A. Back & Sons, each won a first prize. Alder Run Orchard, J. A. Boak & Sons and A. W. Cowell took one or more second prizes each. S. S. Pennock Co., of Philadelphia, and the Pittsburgh Cut Flower Co., each won a silver medal in the second prize on celery, and second on flower show.

THE EARTHWORM AND ITS ENEMIES

The fact that the lowly and simple earthworm is of inestimable aid in the enriching of the soil is perhaps not so well understood as it might be or greater efforts would be taken to protect it from its enemies, especially such greedy ones as the robin and the blackbird, or "noisy grackle," as it is also called.

In the spring of the year when the soil is damp and the worm appears at its best, the soil is broken up and pulverzied by the plow and harrow in preparing for the season's crops, and, as a result of all this, millions of these silent, indefatigable workers are exposed and quickly devoured by the myriads of birds which swoop down and follow the plow, harrow and cultivator. Of course, the birds also devour the bugs, grubs and other noxious pests which might damage the crops, but it is a serious question in my mind whether the harm they do by destroying the earthworms is counterbalanced by their destruction of the other insects. Indeed, of late, the blackbird has become so numerous and the scope of its destructive activity so wide, that I am quite sure steps must soon be taken to keep this unlovely and unmusical nuisance better under control.

Have you also noticed that just as in proportion to the increase of the blackbird and others of his kind, there is a steady and ever increasing scarcity of the beautiful songsters of the wood and field. This is a fact. Why is this so? I answer because they are in most instances overmatched in strength by the "grackle" which fights it away from its nest and food, and consequently the eggs cannot be laid, or, if laid, are destroyed and as a result they will soon become extinct.

The blackbird and robin destroy many insect pests it is true, but if

given the chance, a number of other birds will do the same without also destroying the earthworm and this is the point of this article. The turkey, guinea, hen and chick would also catch many of the bugs and insects that are eaten by the birds I particularly detest if given the opportunity.—R. I. W.

THE ENGLISH SPARROW

It is said that coarse salt will destroy the English sparrow. They are inquisitive, and voracious eaters, and the salt granules appeal to their taste and suit their bills. The salt acts like a poison but we also feed poison to rats and mice and are overjoyed at the destruction of the rodents.

The truth of the matter is that the one is no better than the other, both pass their entire existence in destroying food valuable to man and which can ill be spared at the present time, but sentiment seems to favor the bird. I have not yet, myself, used this method of getting rid of this unwelcome foreigner but have often been tempted to do so.

If any one wishes to try this way of ridding the home of sparrows, care should be taken that nothing but the sparrows eat the salt. An exposed place, shelf or platform, slatted or wire so that only this small creature can pass thru, is the safest way.—R. I. W.

WHITE STAKES

Maybe it is because I have been raised on a fruit and truck farm that I like to have something to make a straight row by; but whatever the reason, I think that it pays. I have seen farmers with every other equipment up to the minute who tried to mark out a field or start a field by sticking a piece of paper on a post or hunting around for a stick or a limb to sight by.

When I started this farm I sawed out 5 stakes just 6 feet long. I painted them all white. Then with a lead pencil I carefully marked the different widths of rows that I expected to use. You wonder why I want 5 stakes? Well, just because sometimes one will be broken or in another part of the field and so it is pretty easy to have the 3 that one needs without so much walking. I have saved more time in the use of the stakes I am mentioning than it took to make them and far more time than it takes to hunt around for a stick or a limb when I am in a hurry.

My desire for a stake that one could see plainly almost any day at 40 rods was satisfied by painting the tops of the set of stakes white. This is a whole lot better than natural wood color, but a whole white stake beats even the white top.—E. Rogers.

LIKES THE PICTURES

Dear Sirs:—I write to inform you that I am enjoying the new feature of your valuable paper,—"Passing Events in Pictures." This page is both interesting and educating, as it gives the farmer a vivid picture of the happenings in the different parts of the world. Hoping it may be continued, I remain

A Satified Subscriber,
(Signed)
David G. Martin, Palmyra, Pa.

Make the hens work for what they get. Unless they have to scratch for their feed they become lazy parasites, just like folks.

TWO LIVE HORTICULTURAL QUESTIONS

By J. P. STEWART

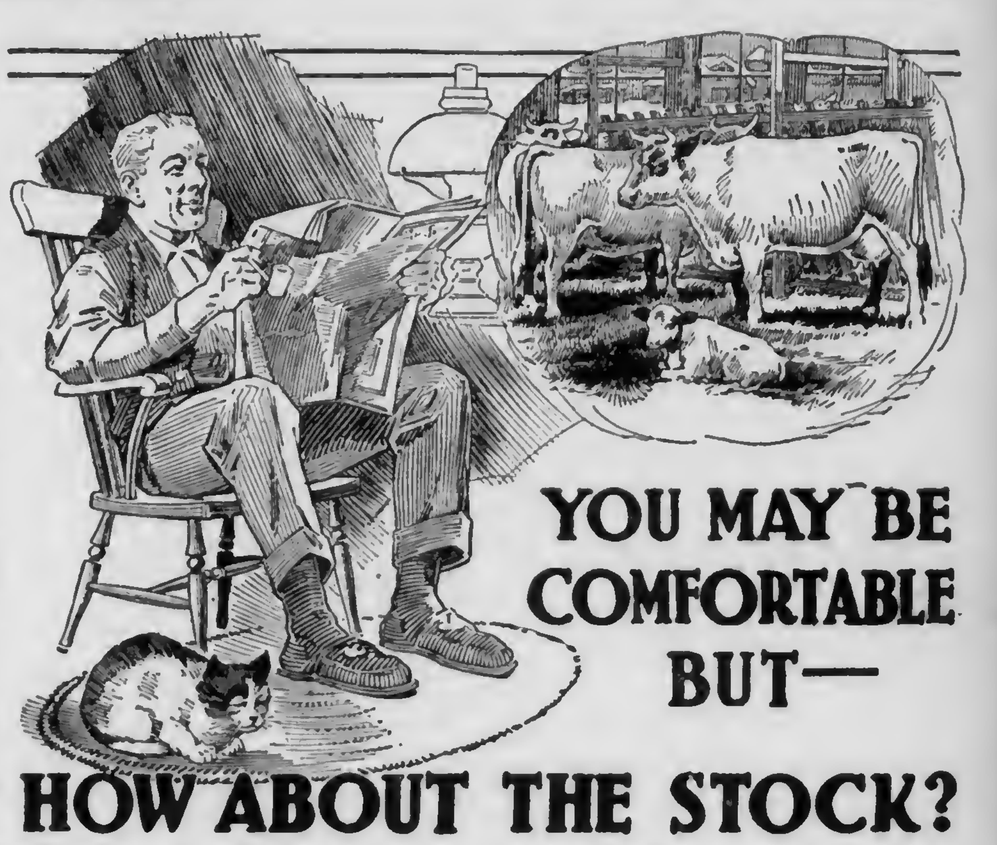
If we are to judge by the queries and comments that are coming to our attention, the commercial fruitgrowers of the east are very much concerned just at present over two important problems of the coming season. The first of these is how to get the apple scab under control again, and the second is how to handle their trees, in the matter of fertilization particularly, so as to secure the largest possible crops during the next few years. The present high prices for good fruit have given special importance to those methods which are likely to secure maximum crops of the right kind of fruit.

The scab situation was very vividly presented recently by one of the largest and best growers in the Cumberland-Shenandoah section, when he advised one of his callers to go out into his leading orchard and look for scab-free apples, and if any were found, the owner would give him a dollar apiece for them. This, moreover, is in a general section in which scab was practically unknown until the last two or three years. He also stated that he expected a tremendous quantity of fertilizer would be "spilled" in his general section during the next few years,—much of it probably unwisely — because the growers could not afford to leave anything undone which might contribute in any way towards insuring a regular and satisfactory crop.

We have also heard of some contemplated programs for scab control which at least appear unwise to the writer. One of these involves a drenching spray during the winter with a strong miscible oil that has considerable carbolic acid in it. The idea back of this seems to be that such a preparation would clear the buds and twigs of all scab infection and thus avoid any further difficulty next year. The main trouble with this plan, of course, is that the scab doesn't pass the winter that way, or at least not to any important extent, and any effective action against this disease will have to be based on the real habits and life history of the fungus involved.

For the benefit of those who may not be entirely familiar with the over-wintering habits of the apple-scab fungus, we may simply say that it passes the winter almost entirely in the dead apple leaves of the preceding season. In the case of a few varieties, such as those of the Fameuse group, there is some evidence that a little of the fungus may sometimes get over the winter on twigs or buds, but the big source of new infection each year is in the diseased leaves produced the preceding summer. One of the important opportunities for clearing an orchard of this disease therefore, is to be found in the proper management of the old crop of leaves.

One of the most effective measures that can be taken at this stage of the disease, is to burn the leaves. This is not always practicable, as some raking and clearing immediately around the trees is likely to be needed before the burning can be done effectively and safely. Its general efficiency, however, is attested by some unexpected experience obtained some years ago at one of the New England stations. At that station, some rather extensive spraying experiments were being planned to get additional information on the



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control of this disease in the following spring. Along in the preceding fall, however, a fire got started in the orchard and swept it practically clean of all leaves and other vegetation. The result was that there was no scab to spray for the following spring, and the cleaning up was so thoroly done that it was several seasons before any important re-infestation appeared.

Another control measure that is capable of doing considerable good is to bury the leaves by plowing or otherwise stirring the soil. To be effective, however, this should be done before the buds get started into growth to any extent, and the job should be very complete. Owing to the difficulties that are usually encountered in trying to carry out this program, it should not be relied upon too much, and the additional impediment that it is likely to offer to the early spraying program is also against it. It has sufficient value, however, to make it well worth considering and planning for whenever the conditions for it are favorable.

The final and most important resource in combattting this disease is by means of proper spraying. This has been described so often that it seems a waste of good printer's ink to go over it again, but from the recent queries and the probable actual importance of the matter during the coming season, we may be justified recalling attention to the more important features.

If the San Jose scale is also present in the orchard, it is usually good practice to defer the scale application of lime-sulphur until the buds are starting into growth. Both scale and scab can thus be sprayed for at once. If the area to be covered is not too great this application can even be deferred until the blossom buds are beginning to open, but before any of the pink is showing. I have applied lime-sulphur at full winter strength clear up to the time that the pink was showing freely, and even a few of the blossoms were open, without any serious effects so far as spray injury was concerned, and under ordinary conditions this is one of the most effective times to spray for the scab. It is too risky to wait so long as that before starting, however, even in small plantings, because of the danger of unfavorable weather, which might prevent the scale application altogether.

If the scale application can be made at just the right time, no further scab application is needed as a rule until after the petals fall. When this is not done, however, the first scab application should be made when the blossoms are showing pink and the flower stalks are separated, but before any considerable number of the petals have opened. Some prefer Bordeaux mixture (4-4-50) for this application, and it may be needed in very severe cases, but in general, lime-sulphur at 1 to 30, or a density of about 1.01, will do the work very satisfactorily. Its greater convenience and cheapness, therefore, should give the latter material the preference in most cases.

The second scab application should be made immediately after the petals fall, and the third should be made about two or three weeks later. In these two applications, lime-sulphur is generally used, because of its greater freedom from russetting the fruit, and lead arsenate is added to control the codling moth. Another application of either lime-sulphur or Bordeaux may be made about the last week in July or the 1st of August, to prevent late infection, but as a rule the first three applications properly made are sufficient to protect the fruit against scab under all ordinary conditions. In low ground, or in seasons especially favorable for scab, or where the trees are too dense, some additional spraying or even pruning may be necessary, but the applications just named should be sufficient as a rule.

Fertilization Problems

This matter also has been worn rather threadbare already, but we may again be excused for alluding to it further, for the reasons stated above. If fertilizer is going to be used very extensively during the next few years, the growers at least should take advantage of the best information now available as to how to use it most effectively. As most of our readers already know, the writer considers that the most effective fertilization of any orchard can only be determined by proper studies in the orchard immediately concerned. There are a few fairly general facts, however that are well worth keeping in mind.

In the first place, we may say that the results of some eight or ten experiments continued over an eleven-year period indicated that nitrogen was more often needed in orchards than any other plant-food element. The addition of phosphorus, potash, or lime, either singly or in combination, gave little or no benefit in the absence of nitrogen additions at the same time. When nitrogen was added, however, the further addition of some one of the other elements usually resulted in a marked increase in the benefit received from the nitrogen alone. In general, nitrogen and phosphoric acid, in the ratio of about one pound of the former to two pounds of the latter, usually gave the best results.

The nitrogen is best applied in readily soluble form, at least in large part; and for the first year at least, it is probably most effective when applied about the time the buds are starting into growth. From three to five pounds of nitrate of soda, or its equivalent, are enough for an ordinary apple tree in bearing. Care should be taken to spread the fertilizer well out from the trunk of the tree so that it will be able to reach the real feeding roots, and the soluble carriers of the various fertilizer elements may either be left on top of the ground to be carried down by the next rains, or they may be lightly worked into the soil. If potash is used, about two pounds of the muriate, or its equivalent, should be enough for a bearing tree.

MICE IN THE ORCHARD

I have just finished protecting my young apple trees from the mice for the winter, and have found that these pestiferous little rodents have already been at work gnawing the bark. The open winter of last year allowed the mice to multiply to a greater extent than normally, and they are going to do a lot of damage to young trees this winter. It is not too late to make a stand against them. Clear off the sod and trash from a space three or four feet wide around the trees, and mound up the earth a foot or more high around the trunk. If a whitewash, to which lime sulfur has been added, is first applied to the trunk, it will help to keep the mice from gnawing the bark. It is best to dig a hole a few inches deep around the trunk before the wash is applied to protect the underground portion then fill it again. I have known mice to tunnel completely around apple trees as large as seven or eight inches in diameter, completely girdling the trunk and following down the large roots for a considerable distance, while leaving no signs above ground. Wire or veneer tree guards also help to protect the trees; it is possible to poison the mice. The man who neglects to protect his young apple trees this fall, is going to find a lot of them completely girdled in the spring.

THE PRUNING OUTFIT

Did you ever consider how many good fruit trees have been hacked, mutilated, and ruined by the use of the wrong kind of pruning tools? Where a grower has several acres of trees he should be equipped with several saws of the right type, a pair of pruning shears and a strong knife. Sometimes he may need pole-pruners, but usually he can get along pretty well with the saws. They are the most essential part of the equipment. One of the two or three saws should be pointed to use in tight places between limbs.

Where an orchard has been carefully pruned, a saw two feet long and tapering will prove satisfactory. In old orchards a larger saw is needed.

The saw with coarse teeth will do the work but it is harder to handle than one with smaller teeth. Where an old orchard needs a renovating, it is necessary to prepare for the work with a heavy saw. As a rule no saw more than twenty-seven inches long will be found practical. Fruit growers usually own a good pruning knife. It should be heavy, and the blade of the hooked type. The big knife with blade one-third hook, is preferable.

A pair of shears are useful. Good-sized patterns are needed, and it is well to pay attention to strength and lasting qualities. Where the trees are small or have been carefully kept, the hand-shears will be the most used tool. A pole pruner has its uses in high trees for nipping side growths but for general trimming is not suitable for it does not leave a neat and smooth surface.—Warner E. Farver.

MAKING POTATOES EXHIBITS WORTH WHILE

(Continued From Page 3.)

Blemishes and Diseases: Exhibit should show no evidence of blight, rot, grubs, scab, rhizoctoniose, sunburn or mechanical injury.

Shape: Market prefers a medium sized potato weighing about eight ounces.

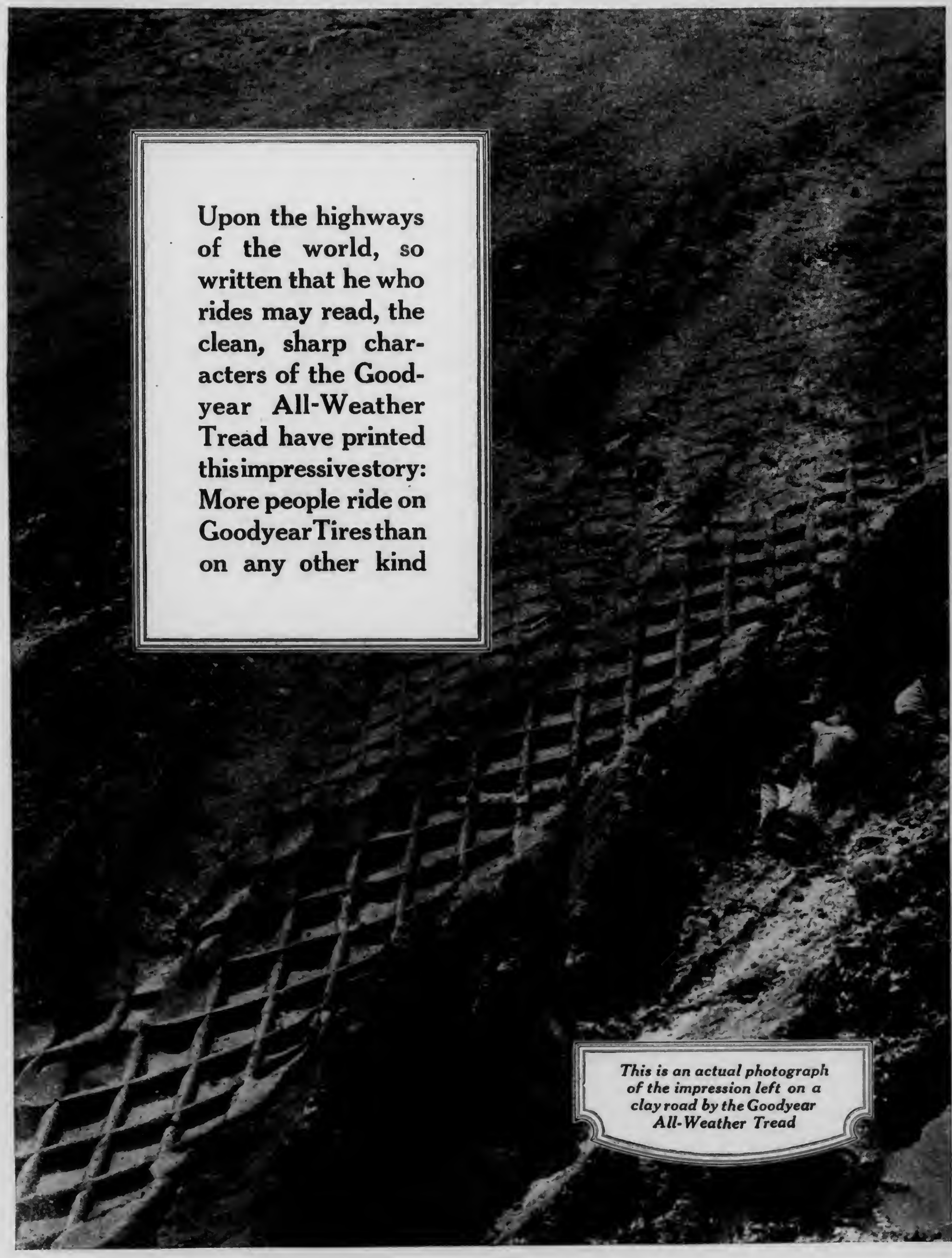
Quality of Flesh: Market prefers a clear white flesh, crisp when cut, free from watery centers and from hollow and dark areas.

Depth and Frequency of Eyes: Market prefers few and shallow eyes.

Color and Texture of Skin: Market prefers a white smooth skin tho uniform netting indicates good quality.

A Suggested Score Card

	Perfect Point Exhibit
Uniformity	20
Freedom from Blemishes and Disease	20
Shape	15
Size	15
Quality of Flesh	10
Depth and Frequency of Eyes	10
Color and Texture of Skin	10
	100


Upon the highways of the world, so written that he who rides may read, the clean, sharp characters of the Goodyear All-Weather Tread have printed this impressive story: More people ride on Goodyear Tires than on any other kind

This is an actual photograph of the impression left on a clay road by the Goodyear All-Weather Tread

GOODYEAR

MADE IN U.S.A.

FUNCTIONS OF FARMERS' ORGANIZATIONS

Secretary of Agriculture, Fred Rasmussen, says: "Within the past few months, legal proceedings have been instituted against several different farmers' selling organizations in the United States alleging restraint of trade. This action has great significance not only to farmers but to the whole public. It raises the question as to whether we want better business methods practiced by farmers in getting their products upon the markets or whether we prefer them to continue the same old haphazard methods that are frequently wasteful, costly and unbusinesslike.

"Anyone, who is at all familiar with the temper of the farmers of this country today, knows full well that they are going to organize for business purposes. Regarding this movement there are two alternatives, one of which the public must choose. Either collective buying and selling by farmers must be recognized as a proper and legal method of business, or else we may expect to see farmers' unions organized simply for the purpose of demanding higher prices for their products and shorter working days, and the use of the strike as a method of obtaining these desires. It is unnecessary for me to call attention to the unfortunate results which would certainly follow this method practiced by farmers.

"There is evidently a misunderstanding as to the real purposes of farmers' organizations as they exist today. It is not true that the sole purpose is to increase prices. Farming is a business of small units which fact has made difficult the introduction of good business methods used in other fields where large scale business could be more readily conducted. The only way that these better methods can be introduced into agriculture is thru organizations of many farmers. These organizations have for their purposes the collection of larger quantities of products; more economical assembling; better grading, packing, shipping, warehousing; more and better credit and all the other things which enter into good business practice. This does not mean elimination of businessmen. On the other hand, it will benefit business, because whatever benefits agriculture reacts favorably upon the other industries allied with agriculture. Furthermore, the public generally must benefit by the introduction of these methods, since that will result in better products at lower selling costs."

WILL BE CAUTIOUS

I was much interested in the views expressed by the Girls, and hoped to have "the other side" discussed, also. While I am not a farmer by profession, I do live in a small country town and am acquainted with and sympathetic with the farmer's viewpoint and problems. I also am a young man, and can heartily second the opinions expressed by the writer of the first article, namely, that the honest-to-goodness, old-fashioned, trustworthy-thru-thick-and-thin girl is as scarce as the proverbial hen's teeth. Hence, and consequently, those of us who would appreciate a home of our own are compelled to do without and live "at home," as the expression goes; while the other kind raises cain and breaks up their newly-formed home and companionship. As for me, I have decided not to contract such a serious bargain until I meet "Miss Right." Perhaps our pathways will cross sometime,—if not, I'll have the satisfaction of knowing that I did not rush in blindly and make some girl's life miserable by a mismated marriage. However, it does seem to me that there should be some way for earnest and trustworthy young people, of both sexes, to meet, besides the one mentioned by one of the correspondents, i. e., by the medium of advertisement, which is repugnant to any healthy-minded person. But I suppose that, since we have drifted so far from the solid ways of our fathers in matters political, economical, industrial and religious, it would not be such a great step for us to recognize this as a legitimate social innovation. We have cast off all moorings in so many lines that one more innovation will not be noticed so much, I guess. We are drifting, yes, but whither? Are we to witness in our own time a repetition of the great social and industrial upheavals and cataclysms of the past, when virtue was but a mockery and the truth made a lie? We are drifting, but let us hold fast to the solid home-life, which was the foundation of our beloved country, and which may prove to be the strong cable which will save our drifting bark from drifting completely away and foundering.—A. K. R.

A Well Kept Attractive Farm House

GRANGE WANTS NATIONAL ROADS

Of national interest to truck owners is a series of conferences which representatives of the National Grange are holding with Senator Townsend of Michigan relative to his bill in Congress providing for the building and maintenance of a national highway system by the government under a Federal commission.

M. L. Pulcher, points out that the action of the National Grange, which comprises 700,000 farmers, in endorsing a national highway system at their annual convention in Grand Rapids, Mich., recently is the most significant step yet taken to obtain legislation for the problem which the tremendous expansion and use of the highways by motor vehicle has brought to the front as a real necessity.

"The motor industry has played no small part in the development of the roads of the country," he said. "They have helped in the expansion of the network of roads which bind the towns and the villages, the cities and the farm hamlets.

"A national highway system will give a tremendous impetus to inter-city haulage. The great highways of commerce will be strengthened and made more durable. The truck will become in reality the "little brother" of the railroad.

"If a great body of farm folk of this country believe that a national highway system will be beneficial to them, how much more beneficial will it not be to the manufacturers, part of whose transportation problem is vitally tied up in the motor truck.

"The farmers with great vision for the future and their own needs have gone on record in favor of a national highway system. When will the business men and manufacturers go on record?"

A YOUNG MAN EXPLAINS

I shall endeavor to list a few of the possible reasons why we leave the farm. First. Not many years ago, our fathers' farms were quite larger than they now are, and whenever son or daughter got married, they were given a strip of the farm. Now the number of families of the nation have increased, the farm has grown too small to be divided up any more, so where will son or daughter go when they want a home of their own? Father and mother may have grown past the prime age of life. They have forgotten the time when they were children, they have vague opinions of the worth of new devices for farm use, so living in the home with them becomes disagreeable, so we have naturally nowhere else to go but to the city. Second. If some parents would treat their children like they do the hired help, let them have a little spending money of their own, one would find life worth while to live. The farm would naturally have a better outlook, altho this is impossible at times. Third. Again, the ready cash of the cities, with its shorter hours as compared to the farm have allurements too strong to express. Why toil on a farm 12 or 14 hours for three or four dollars, when you can exert less strength elsewhere work only eight hours, and draw five dollars? Fourth. Undoubtedly, the amusements of the city, the motion pictures, the theatres, and such, the intimacy with the opposite sex draw a number of those whose minds are weak. Fifth. Occasionly we will find a home where the girl must do the heavy farm work of the boy, but such a farmer has over estimated the worth and purpose of his daughter. It also happens that the boy has to be Mother's Girl, all because the children may have all been all boys or girls. And then it happens when both are in a family, the boy or girl have to do work the other should do, such as a boy milking, and churning, a girl feeding the cows and swine. All such seemingly little things help to create a hatred for the farm, and its so called drudgeries. Such a case I would term lack of system.

Now for a few possible remedies. If our children were given a different kind of education, if they were taught about the beauties of Nature, the nobleness of the farmer, how the rest of the business of the world could not exist, were it not for the sturdy tiller of the soil, conditions might be bettered. Our city schools teach Agriculture, why don't our country schools do the same? Why "Cast pearls before Swine," I mean by this, why teach agriculture to those who don't farm, and not to those who do?. "In the elder days of art" our fathers went to school until they were twenty or more, but now we want to quit at fourteen or sixteen. We have failed to reach the period of our lives when we could learn the most, therefore our rural schools are turning out some poorly educated persons. If legislation could be enacted to cause our children to go to school at the age of nineteen or twenty one term, their minds would be better developed and in the one year of later schooling, they would learn more than their two years of earlier schooling would give them. If some good rural literary society could be organized and kept up, a considerable amount of educationable entertainment could be provided for the younger of us. It would also refresh the memories of our parents.

In closing, let me make an appeal to all those who love the farm to stay there, if possible, or at least return as soon as conditions permit. The farmer is the most independent of all living mortals, may rise when he chooses, rest when he pleases, do what he likes, take off the days he wishes to, need not work when it is stormy, and when the long wintry months come, he has potatoes in his cellar, flour in the garret, and all he has to do is attend to the chores, and rest if he so chooses. Uncle Joshua of Jefferson County, Pennsylvania.—P. S.—I'm not as old as my name would indicate.

USE FOR OLD HORSE SHOES

. In carting our apples this fall in barrels and peach baskets, or in hauling them over rough ground on a drag sled, I found a splendid use for old horse shoes. By setting the barrels or baskets close together and slipping an old shoe down over the edges of two, any number may thus be fastened together. If there is six barrels it will require nine shoes. There is little danger of any tipping over or falling off even on rough ground.—T. C. Case, a five-year-subscriber.

"GET TOGETHER"

I would say that the little article I saw in a recent issue of Pennsylvania Farmer entitled, "Get Together," was written by a live wire. I think it is time the farmer woke up and spoke for himself and not wait for some one to tell him what to do. Others set the price on his products. The farmer is the first to be called on to bring down the high cost of living and he will meet others more than half way every time. Oh, he is a good fellow! I say, farmers, get together is right, and then stick until we get our rights.—John Heller, Wayne Co., Pa.

The most successful farmers invariably are those who work hand in hand with the agencies which are trying to improve agriculture.

PASSING EVENTS IN PICTURES

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(Photo. Copyright by Underwood & Underwood)

1.—Sec'y Daniels Reviews Mine Sweeping Fleet. Captured Mine in Foreground.

2.—Women Delegates at Labor Party Organization in Chicago.

3.—College Girl turns Bootblack to help Raise Funds for Worthy Cause.

4.—R. C. Leffingwell, Talked of as Successor to Sec'y of Treasury, Glass.

5.—Nicholas Longworth a Representative from Ohio, Son-in-law of T. Roosevelt.

6.—One of the Three Physically Perfect Students found in the Boston High School.

7.—A Forsaken Bar now used to Display Christmas Toys.

8.—Mount Holyoke College Girls engaged in a Speedy Game of Hockey.

9.—An 11-year old Refugee Girl Salvaged by the British. She has been Married Twice.

STRONG, HEALTHY, BIG-BONED WELL-COATED PIGS

THAT'S the kind Ubiko Pig Meal makes. It contains 18% protein, 5% fat and only 8% fibre. It is merely a mixture of the purest cereal and nut meals with high-grade tankage. It serves three purposes: (1) to nourish the pig in dam, (2) to increase the milk flow of the brood sow, (3) to carry the little pig over the weaning period and up to the age of 5 or 6 months. Write for sample and full feeding directions.

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UNION GRAINS. The most profitable investment a dairyman can make from the standpoint of increased milk production. It makes a perfectly balanced ration with hay, silage, or other roughage. Cows like it. It is readily digestible. It is bulky and goes far—8 quarts weigh 6 pounds. Protein 24 percent; fat 5 percent; carbohydrates 52 percent; fibre only 10 percent.

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You can do the job right with one like this. Our Special Quality Razor made by the Geneva Cutlery Co.—Uncle Sam's Razor Makers.

This razor is made of the finest quality of steel, hollow ground, honed, stropped and set ready for use. Secure one of these razors and within 90 days if you are not entirely satisfied, return it and we will replace it with another one.

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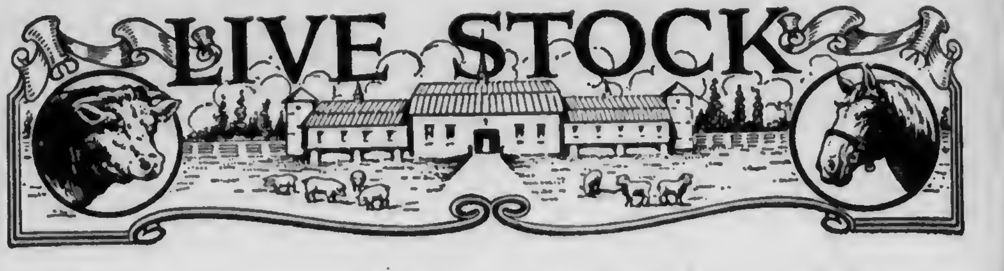

International Livestock Exposition

Another International has capped the climax. Once again has it been demonstrated that quality in the four great classes of American live stock is strongly in the ascendance. In fact, so great has been the general all-around improvement that the International of this year out-ranked those of a dozen years ago by as wide a margin as the French horse shows and the British cattle shows outranked ours before we struck our present stride. Down thru "no man's land"—that strip which divided lengthwise the great arena where the horses and cattle were being shown—ebbed and flowed the mass of men who are mostly responsible for the improvement of American livestock at the present time. It was an intimate meeting of the greatest livestock convention of the year. Livestock history was being related at the ringside while new history was being made in the ring. And on every hand one might hear frequent comment on the great height to which uniform quality had climbed and prophecies as to what the future was likely to bring forth.

The outstanding features of the great show have always been cattle and horses, because they occupy the big arena practically at all times. This year was no exception. This does not mean that interest was lacking in the hog and sheep departments or in the carlot division. Never was there greater quality displayed in these later divisions, but for the eastern flockmaster the International does not hold so much interest as it might on account of the absence of most of the fine wool breeds. The International is still, and probably always will be, quite largely a Corn Belt event. It was started that way and is supported largely by the people of nearby states, but eastern exhibitors were there and took their share of the awards for breeding stock. One feature of this year's International was the demonstration of quality in stock from the South. This means further down than Kentucky. In fact, the old South is rapidly developing into a live stock section to which northern breeders may look as a future market, but which they must consider when it comes to future competition in the show-ring.

Hay and Grain Show

There was one new feature of this year's show which deserves more space than we can give it. This was the hay and grain show. The conception on which this division was founded was that it was quite important to encourage improved quality in the materials out of which better live stock is built. Educational exhibits of this kind have been held at that place before, but not until the Chicago Board of Trade hung up cash premiums amounting to an aggregate of $10,000 was it possible to realize on the dreams of some of the International directors of past years. This show was quite comprehensive, and the quality of the products was on a par with the high quality of the live stock. There was a heavy sprinkling of Ohio exhibitors in practically all classes and they won their share of the prizes.

The booth shows of the several states of the Corn Belt was mostly on the educational order. All were well put up, and there were many compliments for the exhibitors as a class and for different states in particular. It developed one big idea in a masterly manner. Indiana emphasized the importance of liming the soil and the large clock in the exhibit proclaimed that "the time to lime is now." Iowa showed a patch of corn-soybeans with some wax pigs getting fatter every minute on the well-balanced ration. Michigan had one of the most extensive exhibits, showing the possibilities of her territory by photographs attached to a large state map, as well as by displaying the actual products of her soil. In addition to the many state exhibits there was an interesting collection from the federal department of agriculture, but it was largely too complicated for the average person to grasp quickly. The views shown were attractive and interesting.

Horses

The International had its inception 20 years ago. In the meantime the horse business has almost passed thru a complete cycle. The first International found the horse business in a satisfactory condition, but it had just emerged from an area of depression, the worst, it may be hoped, that horsemen may ever experience.

Thruout the recent war horse prices have not been satisfactory. But the tide has turned. Horsemen are hopeful and enthusiastic. Their cheerfulness is not transient and is not assumed. As one talked with these men at the various fairs and horse shows there was a positive air of confidence in intelligent horse production.

Interest centers in the horse of heavy draft. Of course, there are still many admirers of other classes, the fleet-footed speed horse, the stately coach horse, the graceful carriage pair, all have a loyal following. But modern mechanical progress has made it unprofitable for many farmers to produce the class for which they once had a great liking; so they center their attention on the drafter.

Belgians

The draft horse show began Monday at 9 A. M., with R. B. Ogilvie, Chicago, director in charge, the Belgians first occupying the arena. The judging was done by Eli Sprunger, Harry McNair and A. Latimer Wilson. All the classes excepting the three-year-old mare class, were well filled as to number shown and quality. Some of the classiest youngsters ever shown were brought to light. In the aged stallion class Frison, 7590, owned by Chas. Irvine, Ankeny, Ia., was placed first. He is a very popular type, a rich colored sorrel with plenty of size, fine head, neck and eye, an ideal top line and good way of going.

There was probably as much general interest in the Futurity draft show for yearling draft fillies and stallions as any classes shown. In

the stallion Futurity class, Liberty Chief, also owned by Chas. Irvine, came to the front in a strong class of 20. He has a pleasing conformation, roomy middle, plenty of size and good feet. Grand champion and junior champion honors fell to Lefebure's Clarion, belonging to H. Lefebure & Sons, Fairfax, Ia. Here is a real Belgian drafter, worthy of his distinguished honors.

Percherons

Tuesday the ring was filled with Percherons, and the admirers of this popular breed assembled by hundreds around the arena. The awards were made by Alex. Galbraith, Edmonton, Alta.; W. H. Pew, Ravenna, O., and Harry McNair, Chicago. Every class was filled in large numbers, and some of the best Percherons ever brought out were shown. Breeders reported one of the keenest demands for high-class animals.

Clydesdales

Clydesdales had their day Wednesday. Andrew McFarlane, Palo, Ia.; W. H. Pew and Wm. Grant, Regina, Sask., Canada, judged them. The entries came largely from the East. The classes were of moderate numbers and some animals of rare quality were shown.

Shires

The Shires were less numerous than were the Percherons, Belgians or Clydesdales, but the classes were generally free from commonplace entries and culls. A large portion of all the stallion classes were high-class animals.

Cattle

The cattle show was a fitting climax to the twentieth anniversary of this conclave of meat-makers. From the feed-lot, the plain and the meadow came these beef-laden aristocrats, each luxuriantly robed in the furry garment of this clan. All America contributed to the pageantry of this—undoubtedly one of the world's greatest cattle shows. The Sunny Pacific slope sent steers that claimed the blue and shocked even a Corn Belt grand-champion in the moment of triumph. Northern Calgary of distant Alberta presented a Shorthorn damsel whose color and record were as white as the snows of her clime. The grand champion Hereford bull was bedecked with the royal purple, while the band played "Dixie" and the citizens of the Southland cheered the "White-face" from Georgia. Surely, it was a marvelous exhibition of the imposing strength of the beef industry; and as the arena was finally cleared the collaboration of men and cattle had produced another chapter in the chronicle of human progress, demonstrating the truth that blue-blooded cattle nourish and inspire red-blooded men.

Fat Steers

The steer classes were well up to their usual standard, both in quality and numbers. From the grades and cross-breds came the grand champion steer, Junior Lad, a grade Hereford owned by M. Armentrout of Botna, Iowa. The decision was made by J. J. Cridlan, an English breeder of Aberdeen-Angus, who applied the "Doddie" standard of carcass excellence to all classes. Low-setness, thickness of fleshing, mellowness and above all, smoothness and squareness and hind quarters were the qualifications sought and found in the tops of the steer classes. In fact, early maturity seemed paramount in this showing, just as it has been in the feed-lot.

INTERNATIONAL 8-16 H.P.

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THE tractor that is really a 100-cents-on-the-dollar investment for the farmer is the tractor that can be used practically every day of the year, one that is 100% efficient, both on the belt and the drawbar.

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Aside from its adaptability for all-year-round farm work, the **International 8-16 tractor** is a 100-cents-on-the-dollar investment because of its exceptionally efficient and economical (kerosene) operation; because, too, you can always secure repair and expert service without delay through the 92 branch houses scattered over the United States. Your dealer—wherever he is—has a Harvester branch in easy reach.

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A Safe, Speedy, Positive Remedy for

Curb, Splint, Sweeny, Capped Hock, Strained Tendons, Founder, Wind Puffs and Lameness from Spavin, Ringbone and other bony tumors. Cures skin diseases or Parasites, Thrush, Diptheria. Removes Bunches from Horses or Cattle.

As a **Human Liniment** and Antiseptic for external use it is invaluable.

Every bottle of **Caustic Balsam** sold is warranted to give satisfaction. Price $1.75 per bottle. Sold by druggists, or sent by parcel post, with full directions for its use. Send for descriptive circulars, testimonials, etc. Address

The Lawrence-Williams Co., Cleveland, O.

MOLASSES Richest Feed Lowest Cost Write For Special Price
Philadelphia Molasses Company, 1055 Beach St., Philadelphia, Pa.

Miscellaneous

PENNS VALLEY STOCK FARM
Percherons, Berkshires, Holsteins
"Young Service Boars, pigs either sex."
W. F. RISHEL, CENTRE HALL, PA.

For Sale 1 Shropshire and 1 Yearling Rambouillete ram. Also large ram lambs, both breeds. 6 growthy O. I. C. sows, April and May farrow. Stock reg. H. C. Beardsley, Montour Falls, N. Y.

REG. P. CHINAS, BERKSHIRES, C. WHITES, large strains, all ages, mated, not akin; 8-wk. pigs, bred sows, service boars. Beagles and Collies. Write for circ. P. F. HAMILTON, COCHRANVILLE, PA.

Chester White Hogs, All Ages
Shorthorn Bulls. R. L. MUNCE, Canonsburg, Pa.

PURE BRED Brown Swiss Bulls, also one pair young Jennetts. Come and see the goods. C. Eugene Bown, Forksville, Pa.

FOR SALE 1 Jack, 8 years old, weight about 900, height about 15 hands. Guaranteed sound and sure foal getter. Will sell at a low figure. JOHN C. KOENIG, TARENTUM, PA., R. D. 1, Box 167.

FOR SALE OR EXCHANGE for ponies Black Percheron stallion colt, two Red polled heifers bred, Jersey heifer, extra good. All registered and priced right. F. B. STEWART, ESPYVILLE, PA.

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FOR SALE—O. I. C. PIGS. ALSO RABBITS. Pigeons, Owls, and Bluerocks. Write for prices. FRANCIS SCHEIB, GRATZ, PA.

Horse Blankets
that Wear Like Iron

Don't leave your horse exposed. Give him perfect protection with a 5A Storm King Horse Blanket—a blanket with weight, style, warmth, and strength. 5A Storm King Blankets are known the land over, are made of the strongest, tightest, twisted yarn and fashioned by workmen who are craftsmen at their business. Ask your dealer for the 5A. Look for the 5A trade mark.

WM. AYRES & SONS, Philadelphia
Makers of 5A Motor Robes.

HOUSEHOLD

THE SCARCITY OF SUGAR

High price of candy may deprive some of the cherished sweets this year, to help these people. I will give a few tested recipes that are made very attractive and very eatable substitutes for the all sugar candies.

Dates:—Remove seed from dates and put in their place any kind of nut kernals or peanut butter, roll in powdered or other sugar.

Acorns.—Use fresh roasted peanuts, remove shell and skin carefully so as to keep kernal whole, inserted in a seeded rasin these make a very attractive dainty and sell at a high price.

Molasses Taffy.—Two cups sweet molasses or syrup. (Golden Hurves is best), one table spoonful vinegar, piece of butter size of a walnut, boil until it hardens when dropped in water, remove from the stove and add ½ teaspoonful soda and any kind of nuts or chocolate; pour on butter plate, cool and pull until hard, cut in desired lengths and wrap in waxed paper if to be used in boxes.

Peanut Cluster.—Melt sweetened chocolate and stir in shelled peanuts drop from spoon on waxed or butter paper and cool.

Divinity Fudge.—Three cups white sugar, one cup white Karo syrup, one half pound English walnuts, one cup of water, whites of two eggs. Cook sugar, syrup and water until it forms a soft ball in cold water. Stir the syrup into the beaten whites of eggs, add nuts and vanilla, beat until very thick, pour into a deep buttered pan, and let stand over night then turn out of pan and cut in squares or slices.

Brown Sugar Fudge.—Two cups brown sugar, one half cup water, one ounce butter, boil until it strands from spoon, add cocoa, or nuts and stir until thick, pour into buttered tins and let cool before cutting.

Sea Foam.—Use above recipe. While hot stir gradually in a white of an egg beaten stiff, when thick drop from spoon on waxed or buttered paper. Nuts may be omitted if desired.

Pop Corn Balls.—Cook molasses until it hardens in water and pour over popped corn mix thoroly and form into balls.

From these recipes boxes may be filled to look very attractive.—Aunt Peggy.

RED GERANIUMS

A pot of red geraniums in a window brings back memories of many happy childhood vacations spent at grandpa's on the farm.

It calls to mind a large roomy kitchen with its white pine floor covered thru the center by a strip of hit or miss rag carpet. The white dimity curtains were tied back at the sides of the windows, and the red geraniums lent their color to the outside as well as to the room. A big old wooden rocker with red oil calico covered cushions stood near the black shiny stove. A big gray cat always was asleep in the chair.

Thru the open door one caught a glimpse of the pantry. Oh, the memories of that pantry, with its stone cooky jar placed low enough to be within reach of the smallest boy. That cooky jar must have possessed magic qualities, for it was never empty. Long rows of pumpkin and mince pies stood on the shelves ready for the next day's Thanksgiving dinner when the children would all be there.

A big wood box stood behind the stove, and grandpa always brought in an armful of wood every time he came in from the barn.

It is around the sitting room that the fondest memories cling. After the evening work is all done, and grandma has tied her white apron over her gray and black print dress, she lights the big lamp on the center table.

Grandpa piles the logs high in the broad fire place, pulls his big chair near and reads his paper or the family Bible. Or perhaps he looks at the almanac to see what the weather will be like for Thanksgiving.

Plain But Attractive Dining Room

Before long the steel rimmed spectacles are pushed up onto his forehead and he falls into a doze.

Grandma's mending drops to her lap as she gazes into the fire thinking of the morrow. The children and grandchildren will all be there for dinner. The big turkey is hanging on the porch all ready for the stuffing. All the other fixings are ready. After the evening shadows fall they will all sit around the fire place as in childhood and tell stories and sing songs. Grandma will slip out and bring in great plates of apples, doughnuts, and pitchers of cider.

Grandfather starts out of his doze and declares it must be late. He winds the big weight clock, puts out the cat, and fixes the fire for the night.

Grandma puts away her work, and takes the turkey wing from the mantle to brush up the ashes, so everything will be orderly.

By 9 o'clock silence has settled down over the white house.

Many years have passed since the dear old couple have passed on, but these memories are very real. A feeling of sympathy comes over one for the man or woman who has no such memories to look back to this time of ear.—Kansas Industrialist.

CORRECT WAY TO SET TABLE

The correct manner of setting the table is the one which gives greatest comfort and pleasure to everybody concerned with the meal. It is compounded of kindness, system, cleanliness and opportunity for uninterrupted cheerful conversation.

Place the china and silver on the table so that no piece will come nearer than one inch from the edge of the table. Some one may ask, why? So they will not get knocked off or upturned.

Unnecessary noise at a table interferes with pleasant conversation. Pleasant conversation is as important at a meal as a savory sauce. So put a pad under the table cloth.

Orderly souls are disturbed by things awry. So put the cloth on straight and at even lengths on opposite sides from the edge of the table. Arrange silverware neatly and alike at each place.

Leave space enough in front of each person to place the largest plate to be used without moving silver and china. Moving silver makes confussion.

Place the napkin either in the space where the plate is to go, or at the side of the forks on the left. Fold and place it so that the side is straight with the edge of the table.

Since a certain fork is used part of the meal in combination with the knife and in the left hand, place it on the left of the plate. Place other silver on the right. Put the piece to be used first farthest from the plate. Arrange the knives nearer the plate than the spoons.

Place water and other glasses at the end of the knives near the plate. They are least apt to be overturned when placed here.—Edith Allen.

AUNT PEGGY'S TALKS

SOME CHRISTMAS THOUGHTS

As Christmas time again draws near our thoughts all turn in pleasant anticipation. We hope it may be a happy time for every one. Many have lost dear ones during the past year, but it would no doubt be their wish that we be happy as possible on that festal day. We trust the true spirit of Christmas will prevail in every family and in every community.

"Peace on earth good will to man!" How different would be the world today if every body believed it and acted it. Bitterness and hatred would not be possible. It is well even for a day to remember it, for it may soften some heart and it cannot help but have an influence during the rest of the year.

Let us have a community Christmas where everyone can join in—old and young, rich and poor, black and white. "Jesus loved the children, all the children of the world. Make all about you feel the spirit of the Christmas tide. It will make them better neighbors and will make you happier.

Do not forget when making your gift lists that your town and city friends you wish to remember would enjoy more then any thing else some of the fresh products of the farm. These may be packed in boxes or baskets to look very attractive, some shut-in would appreciate a growing plant. These are so many little things we can do to make others happy and thus enrich our own lives. No one can be truly happy if they are the cause of another's unhappiness.

QUEER PROSPERITY

Yesterday was my little daughter's birthday and I made her the accustomed birthday cake tho it was the first frosted cake I have made since the last birthday. Later it occurred to me to figure the cost and I was rather surprised to find that my very plain 3-layer cake, sweetened and frosted with maple, and decorated only with pink cake candies—no candles and no candy flowers—had cost, figuring very conservatively, 70 cents. This was for materials alone, and of course considerable work was involved. Does this prove the prosperity of the farmer? It might if these high-priced foods were produced at a profit but, are they? It has been demonstrated repeatedly that the bulk of these things cost more to produce than they bring on the market. What is the result? In the effort to get enough ready cash from the products of the farm to buy the necessities of life that cannot be produced home, all these luxuries like cake and desserts in general disappear from the farmer's table. Where they become too high-priced he simply does without them. When materials were cheap we always had cakes and pies but of late they are practically unknown. I am very busy but if I had nothing else to do I shouldn't bake because I couldn't afford to do so. If these times are prosperous then give me the good old destitute days when we had pastry and meat in abundance.—E. M. A.

MOLASSES IN PORK CURING RECIPES

In the present sugar shortage it is advisable, even if sugar can be procured, to use molasses or some kind of sirup in place of it in the formulas used for curing pork. If sugar is used for dry curing, it is better, anyway, to make it into a sirup before using. for salt mixed with sugar will not stick on meat as well as salt mixed with sirup. The use of molasses or commercial sirup does away with this extra work.

The following formulas has been found to give good results for the sweet pickle or brine cure: Select pieces 12 pounds or less and make a pickle consisting of 3½ pounds salt, 1¾ pounds sirup or molasses, or, if preferred, 1¼ pounds sugar, preferably brown. 1 ounce saltpeter and 2¼ gallons water. These amounts are based on 50 pounds of meat. If more or less meat is used, the amounts of the ingredients should be correspondingly increased or decreased, as the case may be. Under no circumstances should the individual piece of meat weigh over 12 pounds.

Place the meat in a stone jar or hardwood barrel, and weight it down with a board and stone. Do not use iron, for it will rust. Then pour in just pickle enough to cover the meat. Leave the meat in the pickle 3 days to the pound of meat, so that a 10-pound ham would be left in

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he pickle for 30 days, and a 6-pound acon, 18 days. After the meat has een in cure a week, take it all out f the jar or barrel, remove the ickle, replace the meat, weight it down, and again pour the same pickle over the meat. Repeat every week.

For the Dry Cure which is applicable to either light or heavy meat: Mix thoroly 3½ pounds salt, 1 ounce altpeter, 1 ounce red pepper, 1 unce black pepper. Then adds 1½ pounds warm sirup or molasses, and mix with the above until it assumes the appearance of sawdust. Apply liberal coating of the aboxe mixture to all surface of the meat, excepting the skin.

The meat should then be placed n a table, clean floor, or in a hardwood barrel, after first sprinkling e surface of the table, floor, or bottom of the barrel with salt. Leave ll the meat in cure undisturbed until the heaviest piece has been in for period of 1½ days to the pound. Thus if the heaviest ham weights 20 ounds, leave all the meat in cure 0 days. Meats cured in sweet ickle or brine should be consumed ithin 90 days from date of cure. eats cured with dry cure may be nsumed immediately upon removal om cure, but the flavor improves ith age, and the meat is better 60 ys after curing. Dry-cured hams ve been known to keep 3 or 4 ars.

Dolly is Better, Thank You

WATERPROOF APRONS

For many purposes a waterproof ron is desirable. Leather is exensive and so scarce now that its e should be confined to purposes r which substitutes are unsuitable.

A material classed as a leather bstitute is well adapted to this e. It has a cotton fabric base and pyroxylin surface coated. It is re durable than ordinary rubberd goods; therefore, well worth its mewhat higher first cost. On the her hand, it is cheaper than leath-.

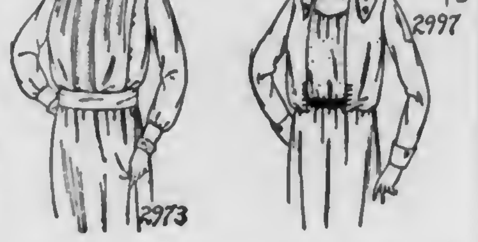
HOME COMFORTS

The article on "Comforts of Farm d City Homes" on page 220 is fine d, theoretically, it is absolutely rrect but it fails to take into conideration several very appreciable ems. If we actually had that utop- economic condition under which large industries are strictly co-perative, speculation entirely elimated, and no huge profits permitted accrue to any one, we could put these recommendations into imediate practice, and if we could we rely would, before anyone had e to remind us. Unfortunately, wever, the present system forces to sell everything at rock-bottom ices and buy at the top notch; we ceive the whole-sale price offered r raw material, and we pay the reil price charged for the finished duct. The minute we stop supply- our own needs largely ourselves place our business entirely at the rcy of the middleman and the speculator, a fact which is becoming more and more self-evident and which is rapidly turning the present day trend toward rather than from home production. For a number of years we tried the opposite method; today we produce for ourselves practically every necessity of life adapted to our location.—E. M. A.

PENNSYLVANIA FARMER PATTERNS

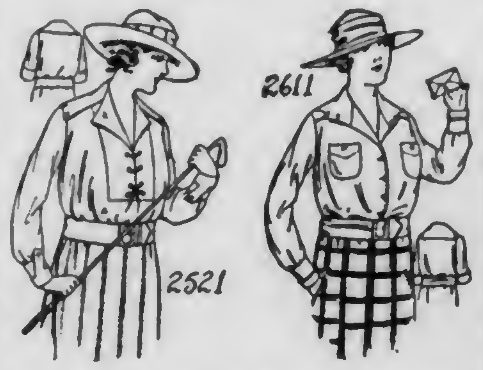
Give figures and letters of each pattern exactly as printed at beginning of each description or we will not be responsible for correct filling of orders. Give bust measure when ordering waist patterns, waist measure for skirt, and age for children's patterns. Address Pennsylvania Farmer, 261 S. Third Street, Philadelphia, Pa.

2973. — Dainty Blouse. — This pleasing model is lovely for batiste, soft silk, Georgette, crepe de chine, embroidered voile, chiffon or net; also for handkerchief linen, or albatross. The right front is finished with tucks, and closes over the left front at the side. Round yoke portions (which may be contrasting material or embroidered) complete this pretty model. The pattern is cut in 7 sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. Size 38 will require 3¾ yards of 27-inch material. Pattern, 10 cents.



2997.—Pretty Blouse.—You may make this of soft voile, crepe, crepe de chine, satin or taffeta, or of net, chiffon, combinations of silk and lace, or similar fabrics. The blouse opens over a full vest that is finished with a round yoke band and a belt. This style of waist lends itself well to embroiedry, beading or braiding. The pattern is cut in six sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. Size 38 require 3⅜ yards of 36-inch material. Pattern, 10 cents.

2521.—Neat Shirt-Waist. — Separate waists have lost none of their popularity, and shirt waists this season are more than ever attractive. For a simple tailored style, this model is ideal. It slips over the head. The sleeve may be in wrist or elbow lengths. The pattern is cut in seven sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. Size 38 requires 3 yards of 27-inch material. Pattern, 10 cents.



2611.—Useful Business Waist.—The collar is convertible, and may be closed in high neck style or rolled low as illustrated. The sleeve in wrist length has a close-fitting cuff, rolled back to form a turnover. The short sleeve is finished with a wide, turnback cuff. The pattern is cut in 7 sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. Size 38 requires 2¼ yards of 44-inch material. Pattern, 10 cents.

WALTHAM THE SCIENTIFICALLY BUILT WATCH AND THE FOREIGN BUILT WATCH

The Smallest Screw in the World

Know These Facts Before You Buy a Watch

THERE are turning operations upon metal made by Waltham machinery that are so minute, so wondrous in their delicacy, so exacting in precision, that the mind is amazed at these triumphs of American skill in watchmaking.

Imagine a machine turning out by the many thousands, screws so small that the naked human eye sees them as points of metal shining under reflected light—screws that measure 254 threads to the inch, and you can put 47,000 of them in a small thimble!

Screws that are hardened and tempered, each one polished on the top—screws that are perfect in sphericity, perfect in thread, perfect for their place in the mechanism of that ladies' Waltham watch movement, which, when completed, is actually smaller in diameter than a dime—a ten cent piece.

The screws in the foreign-made watch are made by hand. But comparing them under the magnifying glass we see the difference between these hand-made screws and the Waltham machine-made product. The foreign screw varies—the Waltham screw is standardized in size and perfection of workmanship.

No human hand could ever match the quantity and quality performance of machinery that creates such miracles as these.

This is one more of the many reasons why the world's leading horologists came to Waltham for time, and still another reason why your selection should emphatically be a Waltham.

Waltham 7½ Ligne
The movement is actually smaller than a dime in diameter
$175 to $1,000 or more depending upon the case

This story is continued in a beautiful booklet in which you will find a liberal watch education. Sent free upon request. Waltham Watch Company, Waltham, Mass.

WALTHAM
THE WORLD'S WATCH OVER TIME

No. 12.—
Chops 3 pounds meat per minute.
Price, $5.00

No. 22.—
Chops 4 lbs. meat per minute.
Price, $8.50

No. 5.—
Chops 1½ lbs. meat per minute.
Price, $3.50

No. 10.—
Chops 3 lbs. meat per minute.
Price, $8.50

SAVE Materials, Time and Labor by using "ENTERPRISE" machines for making lard and sausage.

"ENTERPRISE" Meat-and-Food Chopper has four-bladed *steel* knife and perforated *steel* plate. Gives true slicing cut. No mangling and tearing! No waste of the food juices. Rapid and easy in operation. Use it in the kitchen, too, for table economy.

"ENTERPRISE" Lard Press and Sausage Stuffer saves lard! It stuffs sausage that keeps: the Patent Corrugated Spout prevents air from entering casing. Cylinder bored true—no jamming. Strainer easy to handle—has broad lips.

2- to 8-qt. sizes. 4-qt., Japanned, $12.25
6-qt., Japanned, $14. 8-qt., Japanned, $15
Write us for free "Hog Book," by F. D. Coburn.

The Enterprise Mfg. Co. of Pa.
Dept. 82, Philadelphia

"ENTERPRISE"

Ask your dealer for the "ENTERPRISE."
LOOK FOR THE NAME

Insures Cow Health

THE insulating blanket of still air in a Natco stable wall prevents sudden temperature changes. It protects the health of your cows and keeps up the milkflow in uncertain weather. Natco Hollow Tile walls do not gather moisture as do walls of solid masonry, nor do they absorb grease, dirt or foul odors.

Natco Barns

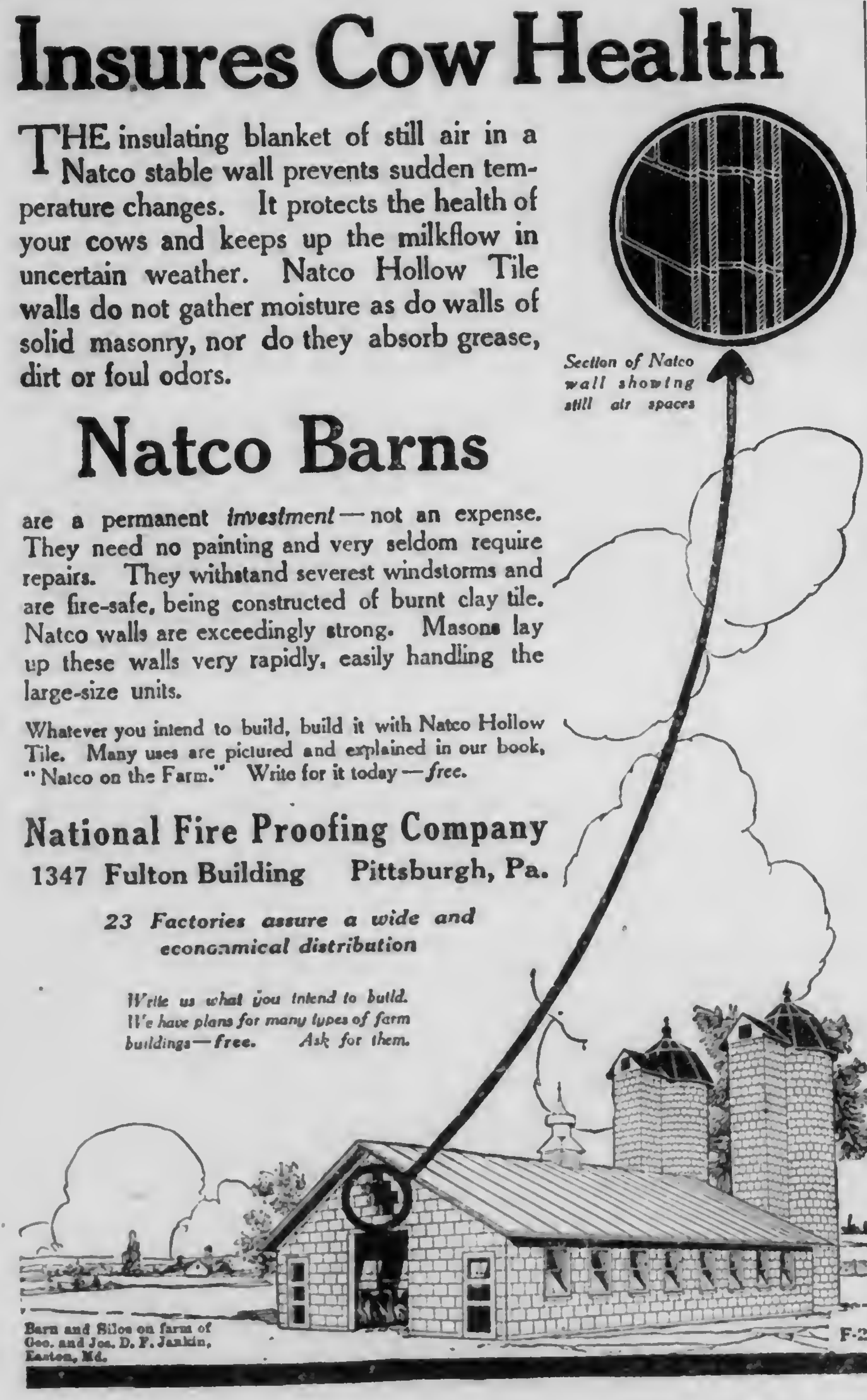
are a permanent *investment* — not an expense. They need no painting and very seldom require repairs. They withstand severest windstorms and are fire-safe, being constructed of burnt clay tile. Natco walls are exceedingly strong. Masons lay up these walls very rapidly, easily handling the large-size units.

Whatever you intend to build, build it with Natco Hollow Tile. Many uses are pictured and explained in our book, "Natco on the Farm." Write for it today — *free.*

National Fire Proofing Company
1347 Fulton Building Pittsburgh, Pa.

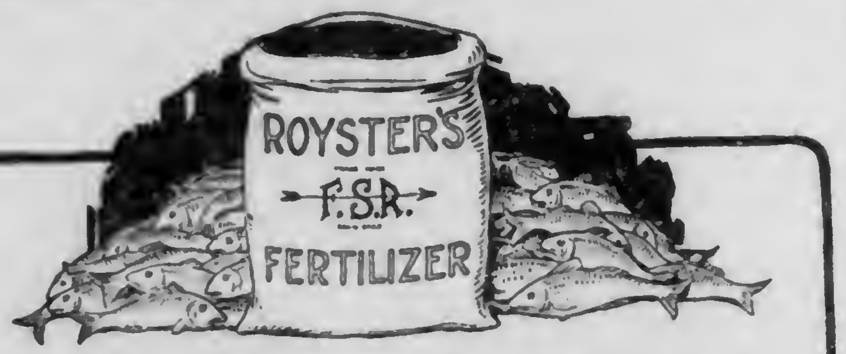
23 Factories assure a wide and economical distribution

Write us what you intend to build. We have plans for many types of farm buildings — free. Ask for them.



Section of Natco wall showing still air spaces

Barn and Silos on farm of Geo. and Jos. D. F. Jankin, Easton, Md.



We have the Fish

TO FARMERS who know the value of fish and want it in their fertilizer, we announce that we have laid in an ample supply of fish scrap to meet all demands. If you want the genuine, original Fish Scrap Fertilizer, insist on

ROYSTER'S FERTILIZER

TRADE MARK
F.S.R.
REGISTERED

The Fertilizer That Made Fish Scrap Famous

F. S. ROYSTER GUANO CO.
Baltimore, Md.

GAMES FOR WINTER EVENINGS

Having been asked to mention thru the "Pennsylvania Farmer" some of the methods of entertainment used at our Neighborhood meetings, I shall try to name some of those which have taken well with us and hope they may be a help to you in planning your evening's entertainment.

If one wishes to brush up a little on his geography, the following game, suitable for any number, may be played with much enjoyment:

Geography

Select two of the company for leaders. Each leader chooses for his side, the sides facing each other. One leader begins by giving the name of some river, mountain, lake, city, town, state, or country, located in any part of the world, that begins with the letter A. The other leader answers with another geographical name commencing with A. The two leaders continue with the letter A until they can think of no more names, then they begin with B, and so on, until every letter of the alphabet has been used. The players simply help their leader with the names. As soon as a name is thought of, it is passed on to the leader to be given next time. No place can be named twice. The side that stands up the longer wins.

Seeing and Remembering

Fill a table with various articles, such as books, scissors, spoon, pencil, pipe, glass, etc., about twenty in number. Keep the table covered until ready for use. Then remove the cover and let all the guests march around it three or four times, touching nothing on it simply looking. The cover is replaced and each one with pencil and paper writes down as many things as he can remember having seen.

Queen Dido's Dead

All the guests sit in a circle and the leader begins by saying: "This is a very solemn occasion." He then twirls his thumbs and looks very down hearted. Beginning with the player at the right of the leader, each one in turn repeats what he has said, very solemnly, twirls his thumbs, and keeps twirling them, until each one has repeated it, and it is the leader's turn again.

This time, he says "Queen Dido's dead," still twirling his thumbs. This goes around the circle as before. Then the player to the right of the leader says, "How did she die?" and he replies, "She died like this," moving his right hand up and down. Thus each one tells his neighbor and makes the motion just as the leader has done.

After each one has said this, still repeating the same question and answer, the leader moves his left hand up and down too, thus both hands are going. The next time both hands and the right foot are moving, then both hands and both feet, next, hands, feet, and head bobbing up and down. The last time, fall back in the chair and utter a terrible groan as if dying.

No one must laugh during the whole game. If he does, he must leave the circle.

Poor Pussy

The company having formed a circle is seated with the exception of the one chosen to be "It." This one, kneels before one of the opposite sex and me-ows three times. Each time she is to be petted on the head by the one in front of whom she kneels and he is to say "Poor Pussy." The one me-ow-ing should make as terrible cries as possible, thus trying to make the other laugh. If, however he does laugh, he is Poor Pussy next time.

Auction

Prepare several bundles, all shapes and sizes, securely wrapped. On each bundle should be marked a name suggestive of what is inside. For instance, a package containing two hair kids, could be marked, "A pair of kids," "A bunch of dates" would be an appropriate marking for a package containing a calendar, etc.

Each of the guests is given fifty beans and the bidding can go no higher than fifty.

The auctioneer, a witty person, stands by the table where the packages are piled, and carries on the sale until all the parcels are sold.

At the end of the sale, they are opened and much fun is afforded by the contents.

Name Them

Photographs of prominent movie players, labeled with names that do not belong to them are hung about the room. Each picture should be numbered. The guests, each provided with pencil and paper, are given a certain length of time in which to guess the correct names, which are written opposite their corresponding numbers. Well known players such as Billie Burke, Mary Pickford, Douglas Fairbanks, William Heart, etc., should be chosen.

The Needle Threaders

To play this, several large jars are secured and set on their sides. Four or five contest at a time and these are men only, as woman are supposed to be experts at this. Each sits on a jar with his feet crossed in front. Each is handed thread and a needle. The contest now begins and five minutes is allowed.

The jars, being on their sides, will roll around, and as the contestants have their feet crossed, it is found a hard task to remain still long enough to thread the needle. If one does succeed, he is certainly deserving of a prize.—R. L. Elliot.

Will readers send descriptions of other good games for winter evenings?—Editors.

INCREASED LAND VALUES

The letter of Earl Rogers, appearing in your issue of November 22 is an illustration of how even the "unsophisticated" farmer is given at times to "hold up" his busy and enterprising neighbors by demanding a price from them for getting out of their way.

The illustrations given by Mr. Rogers should awaken interest, if not indignation, on the part of your readers, but the saddest part of his letter is that he apparently sees no wrong committed and no more principle violated in the incidents he relates.

Any rise in values of from $40 to $160 an acre, was not due to any work performed by the blackmailer, but must have been produced (if it was real) by other agencies over which the blackmailer or his victim had no control. Mr. Rogers seems to see no moral principle violated in the sale of a value which was not earned by the blackmailer.

Mr. Rogers must have some undefined, if confused, idea that there is something wrong with our present system of treating land—the God-given source of all wealth or he

would not have written the letter. If this is so, I hope he will consider this question:—Is land (a natural element which cannot be produced, increased or diminished by man) a proper, just and moral subject of private ownership?

Should he think that the small amounts involved in the illustrations he gives are not of sufficient importance to enlist his thought, let me cite a case I know of in Philadelphia: A man bought three small dwelling houses for $25,000 about 70 years ago. While holding them he carefully refrained from spending any money upon them, but put all the cost of repairing, and the putting in of store fronts on the ground floor, on the tenants, but religiously persisted in putting up the rents as the years wore on. All the time he was receiving a good return on his investment without performing any service. He died some years ago, but his estate sold these obsolete, dilapidated, properties to the city (for boulevard purposes) for $574,000!

Did this man not have the legal power to blackmail his tenants and the people of Philadelphia? Did he not charge a price for advantageous location that was not made by him, but whose value was altogether due to the increase in population and the progressiveness and actively of the people of Philadelphia? What moral right had he to this value? If he had none, then why not stop all future collections of publicly created values by private individuals?—Oliver McKnight.

THE FARMER IS THE REAL POET

Marcus Dickey, the biographer of James Whitcomb Riley, in a recent interview, said that the Hoosier poet had more than once insisted that the farmers were the poets of the world.

"I remember one day particularly," Mr. Dickey said. "Riley and I were tramping across country in a state not very far from Indiana. It was summer and the corn crops on either side of the road were green and healthy looking—and really beautiful as they bent to the little breeze blowing among them.

"We had been silent a long time, just tramping along, Mr. Riley's eyes lingering on the corn as we passed. Suddenly he turned to me and exclaimed:

" 'Call my stuff poetry—me a poet! Right over there to the right of us and over here to the left is real poetry and the farmer who helps to produce it is real poet!' "

Mr. Dickey also said Riley had a great gift for prophecy and it was on this same trip across country the poet predicted the time would come when the farmers of America would drive everywhere in horseless carriages and their fields be plowed with machinery which needed neither horse nor mule to draw. As the bicycle was the limit of man's inventive genius at the time, the poet's prophecy seemed absurd. However Mr. Riley lived to see farmers drive in automobiles and Dickey, his friend and biographer, has lived to see the tractor rise monarch of the field.

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The sire can make or break the herd. Send the scrubs to the butcher's block.

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HAY

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Markets

PHILADELPHIA PRODUCE

Philadelphia, Pa., Dec. 15, 1919.

The supplies of potatoes are very light and the market is very much firmer and higher than it was a week ago, when we reported a firmer feeling with a still higher tendency. At this writing there are only about 25 or 30 cars of potatoes here most of which are Pennsylvania stock with a few from New York State. The Pennsylvania potatoes sold this morning at $3.50@3.65 per cwt., with some rough stock at $3.30@3.40 per cwt. The New York State Stock was being sold at $3.40@3.50 per cwt. With the exception of light supplies being hauled in by the nearby farmers which are selling at 90c@$1.15 per ⅝-basket, these are the only potatoes on our market at this writing. The outlook looks very firm with prospects of a little higher market as some of the best Pennsylvanias are now being held a little above the foregoing quotations.

Sweet potatoes continue in moderate supply and the market is showing very little change from prices quoted in these columns last week. Best No. 1 Maryland and Delaware hampers are selling at $1.80@1.90 with poorer at $1.65 while the No. 2 are bringing mostly $1.15@1.25. The Eastern Shore barrel sweet potatoes continue in light supply and are unchanged in price at $4.25@4.75 per barrel. The nearby New Jersey sweet potatoes also show no change at $1.15@1.50 per ⅝-basket. Southern Yams and Haymans are about 25c per barrel lower. The prevailing price now being $4.25@4.50 per barrel.

Vegetables

As we have previously noted in these columns practically the only vegetables now on our market from our nearby Pennsylvania and New Jersey farmers are the root stock such as beets, carrots, parsnips and turnips, and some hot house vegetables such as tomatoes, mushrooms and radishes, and a little celery. The market on beets is a little higher especially on the loose stock in barrels which are selling from $2.25@2.75 per barrel, with the bunch beets bringing from 3@5c. Carrots are also a little firmer when fancy but ordinary are unchanged prices changing all the way from $2.50@3.50 per barrel. Bunch carrots remain firm and unchanged at 3@4c per bunch. Parsnips are some 25@50c per barrel lower than they were a week ago prices generally ranging from $2.50@3.50 per barrel, altho a few extra fancy bring a little higher prices. The white turnips show practically no change at 25@50c per ⅝-basket while the yellow rutabagas are in light supply and firm at 75@90c per basket. Celery is in light supply and firm at 8@12c per stalk. Under the light supplies hot house tomatoes are higher the prices ranging from 25@80c per pound. Mushrooms show practically no change at $1.25@2.25 per 3-lb. basket as to quality. Hot house radishes continue scarce and firm at 4@4½c per bunch.

Florida Vegetables.—Florida is furnishing the market with cucumbers, egg plants, lettuce, Okra, peas, peppers, romaine, squash and tomatoes. These are selling at the following range of prices: green beans, $1.75@3.50 per hamper; wax beans, $2@4 per hamper; cucumbers, $3@7 per box; egg plants, $1.50@4 per crate; lettuce, 75c@$2.50 per hamper; okra, $2@4 per crate or hamper; peas, $3@5 per hamper; peppers, $3@4.25 per crate; romaine, $1.25@1.75 per hamper. Squash, $3@3.50 per crate; tomatoes are mostly poor and range from $1@4 per crate.

Norfolk Vegetables.—Norfolk is forwarding spinach and kale which are selling as follows: Spinach, $4@4.25 per barrel; kale, $1.25@1.75 per barrel.

New York State Vegetables.—New York State is forwarding Brussel Sprouts, cabbage, onions, celery and rutabagas. Brussel Sprouts are selling from 20@25c per quart. cabbage from $65@75 per ton; onions sell at $5.50@5.75 per 100-lb. sacks for the No. 1s, with the No. 2s at $2.75@3; rutabagas, $1.25@1.75 per cwt.; celery from $4@7.50 per crate.

New Orleans Vegetables.—New Orleans is furnishing Anise, Endive, Escarole, Parsley and Shallots. These are bringing the following prices: Anise, $3.25@3.50 per barrel; Endive, $2.75@3 per barrel; Escarol, $3.25@3.50 per barrel; parsley (Curley) $11@12 per barrel; Shallots, $6@7.50 per barrel.

Fruits

The offerings of apples this morning were the heaviest that they have been for a long time and the market ruled rather slow and draggy with prices generally lower, sales on the various varieties ranging about as follows: Baldwins, $5@8. Fancy large up to $8.50; Ben Davis, $4.50@6.75; Black Twigs, $4.50@7; Ganos, $5@6; Greenings, $5.50@9; Kings, $5@7; Grimes Golden, $5@7; York Imperials, $4@7.60; Nero, $5@8; Spys, $5.25@6.50; York Stripe, $6@7.50; Stayman Winesaps, $6@8.75; Starks, $5@7.25; Russets, $5@6; Various Odd Varieties, $4@8. Box apples: Rome Beauty, $1.75@3; Stayman Winesaps, $2@3.25; Spitz, $2.25@3.75; Delicious, $3@3.75. About the only pears on the market are Keiffers which are selling from $5@7 per barrel. While prices on cranberries are showing very little change the market is firmer and more active sales being made generally from $7@10 per barrel and $2.50@3.50 per crate.

Poultry

There has been a slight advance in the market on live poultry during the past week but dressed poultry with the exception of turkeys which are fully 2 cents per pound higher, is showing very little change over prices prevailing a week ago. At this writing quotations are about as follows:

Live Poultry.—Heavy fowls, 32@34c; small fowls, 24@30c; fancy chickens, 28@30c; inferior, 24@26c; roosters, 21@22c; ducks, 28@34c; geese, 24@28c; turkeys, 36@40c.

Dressed Poultry.—Nearby turkeys, 45@52c; Western turkeys, 44@50c; heavy fowls, 35@36c; small size fowls, 25@32c; nearby broiling chickens, 43@48c; other broilers, 35@46c; ducks, 35@38c.

Eggs

The high prices prevailing in the egg market has had the effect of curtailing the demand, and while supplies are not heavy they were more than ample for the markets requirements at the high prices prevailing and since our last report prices have dropped 8 cents per dozen, the last decline being one of 2 cents which took place this morning and the prices that are prevailing at this writing are as follows: Pennsylvania and other nearby current receipts, 78c; firsts, 80c; Western firsts, 75@78c; Western extra firsts, 80c. What the outlook for eggs is hard to say, but present indications tend towards a steady market at about present prices.

Rabbits

The supplies of rabbits are moderate and prices ruling about steady at 50@65c per pair for the cotton tails and 75c@$1 per pair for the Jack Rabbits.

LANCASTER PRODUCE MARKET

Lancaster, Pa., Dec. 15, 1919.

More than $10,000 was derived today by the city from the annual sale of stall privileges in the Central Market House and along the curb, record prices being paid in every instance. No less than a dozen farmers fought for each place, and some stalls brought more than $300. Eggs were offered today in abundant quantities but were held firmly at eighty cents. Other prices varied little from those of last week.

Butter and Eggs.—Creamery butter, 75@80c lb.; country butter, 80c. Fresh eggs, 80c dozen.; duck eggs, 90c; goose eggs, 10c each.

Poultry.—Dressed old chickens, $2@2.50 each; dressed young chickens, 90c@$2 each.

Vegetables.—Beets, 10c bunch; beans, 10@12c ½ peck.; lima beans, 20c quart; cauliflower, 25@35c head; cabbage, 5@15c head; sweet potatoes, 35c ½ peck; potatoes, $1.65@1.75 per bushel; do., 25@30c ½ peck; turnips, 15c ½ peck; spinach, 30c ½ peck; lettuce, 20@25c head.

Fruit.—Apples, 35@50c ½ peck.

Grain Market.—Wheat, $2.20 per bu.; rye, $1.60; corn, $1.05; oats, 75c; timothy hay, $28 per ton.; mixed hay, $26; wheat straw, $11; oat straw, $10.

YORK PRODUCE MARKETS

York, Pa., Dec. 15, 1919.

Interest in the markets has not increased, either by the farmer or consumer. Nearly all of the State's Road Operations were begun so late that they were far from completion when winter set in. The public now faces the worst road conditions that have obtained in the Eastern section of the state since the advent of the automobile. Conditions are especially bad near York and Harrisburg. It will be altogether impossible for many farmers to use their trucks this winter, while market wagons and horses have been disposed of. This, and the scarcity of help has determined many a farmer to cut out the market end and do what he can on the farm. On the other hand, the consumer is depending more and more on the store and huckster for her supply. These two conditions prevailing, the cost of the article cannot come down.

Eggs.—80@85c per dozen.

Butter.—Country, 60@65c pound; separator, 70@75c pound; milk 12c quart.

Poultry.—Hens, 23@24c pound; dressed, 75c@$2 each; turkeys, 50@60c pound.

Vegetables.—Potatoes, $1.50@1.75 per bu.; 12@25c ½ peck; lettuce, 5@10c head; cabbage, 3@10c head; beets, 5c box; radishes, 8c bunch; onions, 5c bunch; 15@20c ½ peck; lima beans, 25@30c quart; soup beans, 15@20c quart; celery, 5@10c stalk; turnips, 12@15c ½ peck; spinach, 10c ½ peck; apple-butter, 45@50c quart; sausage, 35@38c pound; pudding, 30c pound; steak, 40@45c pound; bone meats, 30@35c lb.; lard, 35c pound; hogs, 20c dressed.

Fruit.—Apples, 30@60c ½ peck; pears, 10c box; 25c ½ peck.

Retail Grain Market.—Wheat, $2.40; corn, $2; oats, $1; rye, $1.70; bran, $3 per cwt.; middlings, $3.50 per cwt.

Wholesale Grain Market.—Wheat, $2.20; corn, $1.50; oats, 80c; rye, $1.40; bran, $47 per ton; middlings, $65 per ton.

NEW YORK PRODUCE

New York City, Dec. 15, 1919.

Butter.—Steady; receipts, 4,789; creamery; higher than extras, 73½@74c; creamery extras (92 score), 73c; firsts, 61½@71c; packing stock, current make, No. 2, 48½@49c.

Eggs.—Firmer; receipts, 4,601; fresh-gathered extras, 84@85c; extra firsts, 82@83c; firsts, 80@81c; state, Pennsylvania and nearby western hennery whites, first to extra, 85@89c; do., browns, 86@88c; do., gathered browns and mixed colors, 84@85c.

Cheese.—Irregular; receipts, 619; state whole milk flats, current make specials, 32@32½c; do., average run, 31@31½c; state whole milk twins, current make specials, 31@32¼c; do., average run, 31c.

Live Poultry.—Steady; chickens, 24c; fowls, 23@30c; old roosters, 20c; turkeys, 35c. Dressed, steady; fowls, 25@36½c; old roosters, 23@24c; chickens, 30@47c; turkeys, 40@50c.

Vegetables.—Potatoes, Maine, $5@5.75 165 lbs.; state, $4.50@5.50; New Jersey, $3.75@4.50; Cabbage, Danish, $70@80 ton; Domestic, $50@70; celery, $3@7 crate.

Apples.—King, $4.50@8; Ben Davis, $4@6; York Imperial, $5@7; Staymen, $5@7.50; Baldwins, $4@7.50; Northern Spy, $4@7.50. Greenings, $4.50@8.50.

BALTIMORE PRODUCE

Baltimore, Md., Dec. 15, 1919.

Butter.—Creamery, western fancy, 72@73c; choice, 70@71c pound prints, 74@75c. Nearby rolls, 40@47c; dairy prints, 50@52c.

Eggs.—State, Pennsylvania and nearby, 75c. Eastern Shore and Virginia, 75c. Southern, 72c.

Live Poultry.—Springers, 26@30c pound; old roosters, 20@21c; old hens, 29c lb.; ducks young; 30@32c; do., poor, 24@25c; guinea fowls, $1.20.

Grains.—Bag lots by sample, $2.10@2.28, wheat, new, No. 1 red, $2.30 do., No. 3, $2.62; garlicky, $2.13; corn, $1.40@1.60; Oats standard white, 85½c; rye, nearby, $1@1.55.

Hay.—No. 1 timothy, $30.50 ton; do., standard, $29 ton; light clover, mixed, $28@29 ton. Clover, mixed, $28@29. Tangled rye straw, $14.50. Wheat straw, $12@13. Oat straw, $14@15 ton.

Western Spring bran, per ton, in 100-pound sacks, $42@43; City Mills Winter bran, per ton, in 100-pound sacks, $50; brown middlings, per ton, in 100-pound sacks, $52, white middlings, per ton, in 80-pound sacks, $65. Quotations on City Mills feeds are jobbing prices.

PITTSBURGH PRODUCE

Pittsburgh, Pa., Dec. 15, 1919.

Butter.—Prints, 77½@78c; tub, 77@77½c; country roll, 58@60c.

Cheese.—New York full cream, 35@36c. Ohio, 34@34½c; Wisconsin Swiss, 54@55c; Philadelphia cream, $1.60 per dozen.

Eggs.—Fresh select, 83@84c; Special, 85@86c; Storage, 60@61c.

Potatoes.—Round, $4.50 per 150-lb. sack. Onions, $4.50@6 sack. Cabbage, $70@75 ton. Lettuce, New York, $2.50@3 box. Sweet potatoes, $4.25@5 barrel. Cauliflower, $3@3.25 bushel. Turnips, $1.75@2 bushel. Celery, 40@75c dozen. Beans, wax and green, $3@3.25 bushel. Beets, $1.50 bushel.

Fruit.—Apples, $7.75@9.50 barrel.

PHILADELPHIA LIVE STOCK

Philadelphia, Pa., Dec. 15, 1919.

Receipts of live stock for week ending December 13, were as follows:

	Beef Cattle	Sheep and Lambs	Hogs
Total for Week	2,541	8,039	10,892
Previous Week	1,875	5,709	7,576

Calves.—Receipts of calves last week were 1,168 head against 1,184 head week previous.

Beef Cattle.—The market for steers was dull and lower. Cows sold slowly and showed little change. There was a fair demand for calves of fine quality, and values were steadily maintained. Steers, good to choice, $15@16.50; do., fair to good, $13@15; common to fair, $11@13; cows, fat, per lb.; good to choice, corn fed, 10@11½c; fair to good, 7½@9½c; do., common to fair, 4½@7½c; calves, extra choice, $21.50@22; fair to good, $18@20; common, $12.50@18.50; heavy and round, $8.50@12.50; Tennessee, choice, $16@18; other southern, $9@13.

Sheep and Lambs.—The market for sheep of fine quality ruled steady under moderate supplies and a fair demand. Lambs ruled firm and higher under light offerings and a good demand. Sheared sheep, wethers, extra, $10.50@11; good to choice, $9@10; medium, $7.50@8.50; common, $4@5.50; ewes, fat, heavy, $7.50@8.25; spring lambs, choice, $16.75@17; medium, $14.50@16; culls and common, $11@12.50.

Hogs.—Offerings were moderate and the general market ruled firm with a fair demand for fine stock. Quotations for best western, $16@16.50; nearby, good, $14.25@14.50.

City Dressed Stock.—There was little activity in the market for steers, heifers and cows and supplies were ample for requirements. Sheep and lambs ruled steady under moderate offerings and a fair demand for fine stock. Other kinds were generally steady. Steers, 17@20c; heifers, 15@20c; cows, 10@18c; calves, city dressed, choice, 28@30c; country dressed, 23@28c; sheep, 12@20c; lambs, spring, 26@28c; hogs, 21½c.

LIVESTOCK

Lancaster, Pa., Dec. 15.—Cattle.—Receipts, 3,152 against 3,810 last Monday; market active; prices steady; good to choice steers, $13.75@15.65; fair to good steers, $13@13.50; medium to fair, $12@12.65; common to medium, $10@11; smooth and fat bulls, $10@11; medium to good bulls, $9@9.90; common to medium bulls, $7@8.50; smooth and prime heifers, $12@13.40; common to medium heifers, $8.40@10.75; good to choice cows, $9@10.50; fair to good cows, $7.25@8.25; common to medium cows, $4.50@5.25; good to prime calves, $20@21; medium to good calves, $16.25@18; common to medium calves, $13@14; good to choice bulls, $10@11.25; fair to good bulls, $8.50 9.85; common to medium bulls, $6.50@8.25; good to choice oxen, $10@12.50; fair to good oxen, $9@10; common to medium oxen, $6.50@8.75; good feeder steers, $12@13.50; common feeders, $8.50@10.50; good stock bulls, $9@10; common grade, $8@7.75; good stock heifers, $9@10; common grade, $6@7.50.

Hogs.—Receipts, 721; market active; prices steady; good to prime, $14@15.50; light to medium, $13.75@14; roughs, $12.75@13.25; stags to sows, $11@12.

Pittsburgh, Pa., Dec. 15.—Cattle higher; supply, 110 cars; prime, $15.50@15.75.

Sheep.—Steady; supply, 25 cars; prime wethers, $10@10.50; culls and common, $3@4.50; lambs, $11@17.50; veal calves, $19@20.

Hogs.—Strong; supply, 70 double decks; prime heavies, mediums, heavy and light yorkers and pigs, $14.25; roughs, $10@12.50.

PHILADELPHIA HAY AND GRAIN

Philadelphia, Pa., Dec. 15, 1919.

Baled Hay and Straw.—Receipts, 264 tons of hay and 7 cars of straw. Fine stock in small supply and steady. Timothy hay choice, $34; No. 1, $33; do., No. 2, $30@31; do., No. 3, $27@28; clover-mixed hay, light mixed, $30@31; do., No. 1 mixed, $27@28; straw, No. 1 straight rye, $15@15.50; do., No. 3, $14@14.50; do., No. 1 tangled rye, $14; do., No. 2, $12.50@13; do., No. 1 wheat straw, $14@14.50; do., No. 2, $12.50@13; do., No. 1 oat straw, $14.50@15; do., No. 2, $12.50@13.

Bran.—Quiet but steady under light offerings. Car lots to arrive, including sacks. Soft winter bran, western, in 100-lb. sacks, per ton, $49.50@50; spring bran, in 100-lb. sacks, per ton, $48.50@49.

Corn.—No. 2, yellow, $1.72@1.73.

Oats.—No. 2, white, 90½@91c; No. 3, 89@89½c.

NEW YORK HAY AND GRAIN

New York City, Dec. 15, 1919.

Feed.—The market for mill feed was quiet and rather irregular. Bran was steady owing to a moderate demand while other feed was slow of sale and largely nominal. Consumers appeared to be well supplied and it was thought that distributers have now covered their season's contract.

Quotations: City feed, bran, $47; middlings, $54, in 100-pound sacks; red dog, $68, nominal, in 100-pound sacks; western spring bran, $48; standard middlings, $50; flour middlings, $59; red dog, $65, all in 100-pound sacks, 30-day shipment. Oat feed, $28.50; rye middlings, $48; white hominy feed, nominal, all in 100-pound sacks. Cottonseed oil meal, $80.50; linseed oil meal, $79, in 100-pound sacks.

Hay and Straw.—The market continues exceedingly quiet and values are still tending slightly downward. New invoices are very light because of the generally embargoed condition of our market, but there is plenty of hay in sight, scarcely any demand and receivers are not hesitating to shade values in order to effect business, this being especially true of low grade, small baled hay at out of the way track delivery points, where some very low prices are being reported. Rye and oat straw steady to firm.

Hay.—No. 1 large bales, $34 ton. No. 2, $30@32 ton; No. 3, $28@29; shipping, $27 ton. Fancy light clover mixed, $32 ton. Clover, No. 1, mixed, $30.

Straw.—Per ton, No. 1 rye, $15; No. 1, oat, $15; No. 1, wheat, $13.

Wheat, No. 2, red, $2.37½.

Corn.—No. 2 yellow, $1.69¼; No. 3, yellow, $1.63¾.

Oats.—No. 2 white, 90c; No. 3 white, 88c.

Rye.—Export, $1.80½.

Buckwheat.—Milling, $3.15 per 100-pounds.

PITTSBURGH HAY AND GRAIN

Pittsburgh, Pa., Dec. 15, 1919.

Hay.—No. 1 timothy, $32@33; No. 2, $29@30; No. 3, $27@28; No. 1 light mixed, $30@30.50; No. 1 clover mixed, $32.50@33. New No. 2 clover mixed, $29@30.

Straw.—Receipts are beginning to run extremely light while the demand is getting better but not urgent. Market looking higher.

No. 1 oat, $13.50@14; No. 1 wheat, $13@13.50; No. 2, $12.50@13; No. 1 rye, $13.50@14.

Ear Corn.—Receipts and demand are both light, not much trading, buyers anticipating lower market. New No. 2 ear corn offered at $1.43@1.44 per bushel.

Oats.—Demand better for oats with light receipts. Trading good. No. 1 white, 87½@88½c; No. 2, 87c; No. 3, white, 85@86c.

PHILADELPHIA DAIRY MARKET

Philadelphia, Pa., Dec. 15, 1919.

Butter.—Receipts, 2,956 tubs. There was virtually no trading except in a jobbing way, and prices showed no important change. Offerings were fully ample for requirements.

Fresh, solid-packed creamery, fancy, high-scoring goods, 74½@75½c, the latter for jobbing sales; extra, 73½c; extra firsts, 68@71c; firsts, 62@65c; seconds, 58@61c; thirds, 56@57c; sweet creamery, choice and fancy, 75½@77½c; do., fair to good, 64½@72½c; ladle-packed, as to quality, 50@52c; packing stock, 47@49c; fancy brands of nearby prints jobbing at 81@83c; good to choice, 70@80c; fair, 60@68.

Cheese quiet and unchanged. We quote as follows: New York, whole-milk flats, fancy, 33c; specials higher; fair to good, 32@32½c; Wisconsin, whole-milk flats, fancy, 32¼@33c; fair to good, 31@32c; jobbing sales of fancy goods, 35@36c.

NEW YORK MILK MARKET

New York City, Dec. 15, 1919.

Distributers could not quite clean up last week and there was a little milk going to manufacturers. Trade which is slow would no doubt improve to a considerable extent if ice cream dealers could get enough sugar to supply the demand. The rate for December for 3 percent milk in 200 mile zone is $3.68 per 100 lbs., or 8c pr quart; 3.06 percent milk is $3.92 and 4 percent milk is $4.08.

Receipts of milk and cream in 40 quart cans for the week ending December 13, 1919 were as follows:—

Railroad	Milk	Cream
Erie	41,839	3,517
Susquehanna	7,885	124
West Shore	10,323	1,148
Lackawanna	54,160	1,310
N. Y. Central (long haul)	124,392	1,802
Ontario	45,948	1,987
Lehigh Valley	46,872	950
New Haven	5,121	45
Pennsylvania	11,048	396
Other Sources	6,250	200
Totals	353,838	11,479
Same week last year	326,864	9,374

TOBACCO MARKET

In this state the situation was characterized by a strong and increasing demand for all types and grades of the 1919 product. Starting at about $18 per cwt. for sound wrapper tobacco, prices have gradually risen to $22 to 25 but, apparently have stopped here. Many are holding in the belief that further advances will be forthcoming. It would seem that such holders are at least justified in their desire for even better returns than at prsent. Compared with prices in general and with prices at which tobacco of other types is selling, as well as the present high cost of production, broad leaf cigar tobacco should command a further advance of at least 50 percent. With thousands of acres of the best land in the country devoted to the product and the labor and attention of so many useful men in the community centered in tobacco growing the reward should be ample and adequate and not more or less uncertain and doubtful as at present. In Ohio the great event of the week was the annual resumption of the Burley tobacco market at the many large auction warehouses in the southern part of the state. High prices which have been so feverishly awaited were realized to the fullest extent. The general average price at which large offerings were sold was above $50 per cwt. The market was the scene of the keenest competition at all times and even higher prices are predicted. The causes of the unusual situation are believed to be the well known short crop and an unusual foreign demand. Growers are receiving approximately $400 per acre, on the average. This is fully twice the value of land upon which the crop is grown.

NEW YORK GRANGE NOTES

The Grange has gained 5,000 members in this state this year the total membership reaching about 130,000. A noted grange speaker of the state recently made the point that if each member bought one tire for a Ford car the combined trade would amount to over two million dollars. The Grange Exchange has done a good business but nothing like what it might be if the farmers bought and sold together.

The story is told that a side show at a circus had a placard up saying that by paying a dime the public could see something it never saw before and never would see again. Inside twelve solemn faced men in the attire that the popular notion of the people clothes a farmer in were all pulling together on a strong post!

The Grange is doing its best to dissipate this notion that farmers will not pull together and there are several very convincing examples of them doing so in the state.

Niagara County Grange No. 1190 has gained 400 in membership the past year, and is to put on a lecture course of six numbers this season. The members of this Grange are buying co-operatively. They are trying to be helpful to their community, and are watching legislation closely, helping when it deems it necessary.

Fulton County has four new granges, one of which already has 300 members. They have purchased a hall and are buying dairy feeds thru the Grange Exchange.

Massapequa Grange is to put on a play soon.

Wolcott Grange recently debated the national highway bill, and passed a resolution disapproving it. It recommended that the Farm Bureau and the Fruit Growers' Association and the Truck Growers' Association be allied with the Grange.

There seems to be a fast spreading sentiment among farmers and farm experts in favor of organized marketing of farm produce. This was very prominent at the week long conference of 200 farm bureau agents and specialists at Cornell University last week.

State Master S. J. Lowell, C. R. White of Albany, farm markets specialist, F. E. Bloge of Fort Plain and Prof. Boyle of the State College led in a discussion which favored co-operative buying and selling, with plans for hay marketing and Grange Exchange trade.—F.

COUNTY NOTES

Union County, Pa., Dec. 21, 1919. —The recent cold spell froze the ground and stopped sod plowing which was being done, but not to as great an extent as usual. Manure has been hauled and spread for corn by spreaders, of which nearly every farmer has one. There is still some corn to husk and some corn not cut which is being husked on the stalk. There will be more public sales and changes on farms than usual on account of so many farms changing owners, next spring. Agent, Luther Cranmer, has organized a cow testing association with Lester Ruhl as tester, after taking a course at State College. The home for feebleminded women in the west end of the county is being opened for patients this week, and they have begun farm work on a small scale. They have a number of acres of farm land. Many hunting parties went to the different camps in the mountains for deer and bear, and one man was shot the first day. Present prices: Wheat, $2.20; new corn, $1.25; oats, 70c; potatoes, $1.25; eggs, 70c; butter, 66c; chickens, 22c; veal calves, 17 to 18c.—J. N. G.

McKean County, Pa., (NC), Dec. 1.—Good weather thru November, freezing up now so cannot plow. Not much live stock for sale now. If price of pork continues to drop it will not pay to raise it, as corn is $3.30 per cwt.; beef is low too. Fresh made butter, 80c; eggs, 95c. Roads have been very good so far—are frozen hard now. Owing to scarcity of help farm work is behind not over 50 percent plowing done.—R. C. Fuller.

Cumberland County, N. J., Dec. 1. —Fair and cool. Farmers are butchering hogs early on account of disease. James E. Rainear killed 7 hogs last week. Pumpkin crop was a failure this year. Leaves have stayed on fodder unusually well as there has not been the usual amount of high winds. Mild fall has given late sown wheat a good start. Sales are commencing at a lively rate.—C. J. S.

DELAWARE FARMERS' WEEK

A Farmers' Week, Tractor School, and Boys' and Girls' Club Week will be held at Delaware College, Newark, Delaware, December 29 to January 3. The Tractor School will be a five day lecture and laboratory course in the care, operation, adjustment, and repair of farm tractors. Two day courses will be given in Horticulture and Soils and Crops, Monday and Tuesday. Wednesday will be devoted to Soil Fertility problems; Thursday will be devoted to problems of marketing of farm products; and Friday will be Live Stock Day. These courses are free to farmers of the Peninsula and a program will be sent on request. Address Dean H. Hayward, Newark, Delaware.

"AGRICULTURAL WEEK," TRENTON, JANUARY, 13, 14, 15, 16, 1920.

"Agricultural Week," the big week for organized farmers of New Jersey, is coming on January 13, 14, 15, 16, 1920, in Trenton.

The State Dairymen's Association will hold a meeting Wednesday evening, of interest to consumers and producers. Dr. E. V. McCollum of Johns Hopkins University, a leading authority on nutrition, will talk on "What to Eat and Why," and H. W. Collingwood, Editor of the Rural New Yorker, will discuss "Reducing the Costs of Distribution in the Interest of Consumers and Producers."

Tuesday, January 13, is Market Day. Farmers last year said that this day was one of the most interesting and important days of the entire week.

Thursday is the big day for State Associations. The State Horticultural Society, the Poultry, Dairy, Potato, and Beekeepers' Associations, the Holstein Freisian and Guernsey Cattle Breeders; Swine Growers, State Council of County Boards of Agriculture, and Home Economics Workers will hold meetings.

On Friday morning the Poultry, Alfalfa, Beekeepers, and Sheep Associations will meet; and on Friday afternoon the final meeting of the official delegates will be held.

Of course the sewing machine will run almost indefinitely without oiling, but it is fair neither to the machine nor to the person who runs it.

Save $200 or $300 on Your Engine

It is no longer necessary to invest in a heavy stationary engine. Use your automobile engine to do the power jobs and save your money. It will do anything a 12 H. P. stationary engine will do and go anywhere an automobile can go.

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Just drive your car up to the Ward Work-a-Ford. Take out one pin, remove starting crank, slip steel coupling we furnish over end of engine crank shaft—and you are ready for a day's work. Flexible coupling takes care of any inaccurate alignment or vibration. No permanent attachment to car or attachment to crank shaft. When uncoupled, your car is just the same as before.

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The Ward Work-a-Ford is staked to ground—not fastened to car—and it absorbs all vibration and strain. Cannot injure car in any way. Friction Clutch Pulley on end of shaft makes it unnecessary to stop and start engine every time you want to stop your machine. Ward Governor gives perfect control of engine and insures smooth, even power.

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Special Articles and Special Numbers

You will not want to miss the following special articles that are scheduled to appear during the winter months:

Hindrances to Complete Farm Organization. The Future of Eastern Farming. Advantages and Disadvantages of the Small Farmer. Dairymen's Organizations: What They Have Accomplished. Poultry: A Specialty or a Side Line. Home Improvements We Have Added. Equipment I Have Added to the Farm.

Special Numbers

Poultry Special, Jan. 10, 1920. Farm Implements and Machinery, Jan. 24th. Seed and Market Garden Special, Feb. 14th. Horticultural Special, Feb. 28th. Motor Truck Special, March 13th.

Aside from these, many special articles bearing on the new developments will be published from time to time. One issue; yes one little article may be worth more to you than the price of a subscription.

PENNSYLVANIA FARMER, 261 South Third St., Philadelphia, Pa.

KEZIAH COFFIN

By JOSEPH C. LINCOLN

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CHAPTER X.

(Continued From Last Week.)

Mrs. Coffin's welcome was not too cordial. She had laughed many times over Abishai's proposal of marriage, but she had never quite forgiven him for making her ridiculous on that occasion. Incidentally, she did not feel like laughing.

"What do you want?" she repeated.

Kyan was plainly nervous.

"I only wanted to see Mr. Ellery," he announced. "It's all right, Keziah. You needn't be afraid."

"Afraid! What on earth should I be afraid of?"

"Why—why, I didn't know but you might be afraid I was goin' to—to talk about what we talked about when I—I talked to you that day up at——"

"There! that'll do. It ain't me that would have reason to be afraid if that was what you come for. What do you want? Don't stand there dancin' a jig."

"Only wanted to see Mr. Ellery."

"He's out. Good day."

"But I won't keep him but a minute."

"He's out, I tell you. Do you want to leave a message?"

"No—o. No, I guess not."

"Was it important?"

"Oh! I don't know. Kind of, maybe. I wanted to ask his advice about somethin'. t's a secret. Only him and me know about it. Good-by."

"Shall I tell him you'll call again? Or ask him to come up to your house?"

Mr. Pepper, who had started to go, now hurried back to the steps.

"No, no," he protested, in alarm. "Don't you tell him that. I wouldn't have him come there for no money. Why Laviny, she——"

"Oh, Laviny isn't in the secret, then?" Keziah smiled in spite of herself.

"Not exactly. That is, not much. Don't you tell her I come here, will you? I'll find Mr. Ellery. I know where he is."

"I wouldn't go to the Danielses', if I was you. Elkanah might not like to have you chasin' after his visitors."

"Oh, the minister ain't at the Danielses', not as late's this, he ain't. I know where he is."

"You do?" The housekeeper looked at him keenly.

"Yes, sir, I do. I know where he goes Sunday afternoons—and why he goes, too. Mr. Ellery and me's good friends. We understand each other."

"Look here, Kyan Pepper! What are you talkin' about?"

"Nothin', nothin'. Good day."

"Stop! Stand still! Come in the house here. I want you to."

"No, no Keziah. Really, I'd love to, but I can't stop."

"Come in, I tell you."

Reluctantly, but lacking the strength of mind to refuse, Mr. Pepper entered the dining room. Then Mrs. Coffin turned upon him.

"What do you mean," she demanded, "by throwin' out hints that the minister and you are in some sort of secret? How dare you go round tellin' people such yarns as that?"

"They ain't yarns. And I never told nobody afore, anyhow. I got to move along. I'll———"

"Stay where you are. I guess I'll run right up and ask your sister about this. Perhaps she might—"

"Ss-sh! ss-h! don't talk that way, Keziah. Don't! Laviny don't know what I mean. Dont go askin' her things."

"But you said———"

"I just said I knew where Mr. Ellery goes every Sunday afternoon. He don't know anybody knows, but I do. That's all there is to it. I shan't tell. So———"

"Tell? Do you mean there's somethin' Mr. Ellery wouldn't want told? Don't you dare—I will see Laviny!"

"No, no, no, no! 'Taint' nothin' much. I just know where he goes after he leaves Elkanah's and who he goes to meet. I— Lordy! I hadn't ought to said that? I— Keziah Coffin, don't you ever tell I told you. I've said more'n I meant to. If it comes out there'd be the biggest row in the church that ever was. And I'd be responsible! I would I'd have to go on the witness stand and then Laviny'd find out how I— Oh, oh, oh! what shall I do?"

The poor frightened creature's "jig" had, by this time, become a distracted fandango. But the housekeeper had no mercy on him. She was beginning to fear for her parson and, for the time, everything else, her own trouble and the recent interview with Nat, was pushed aside.

"What is it?" she persisted. "What would bring on the row in the church? Who does Mr. Ellery meet? Out with it! What do you mean?"

Uncle Amos Says: "Besides havin' a barrel full of meat, plenty of flour and a cellar full o' fruit and canned stuff, we have several old apple trees that must be cut down and they do make dandy fire wood—besides furnishin' plenty of exercise to git up an appetite for buckwheat cakes and sausage. My little grandson said when he came to visit and saw all this, 'Grandpa, you should worry'. So say we. Let 'em strike that wants to. We'll live and be happy, too. Let others learn."

"I mean that the minister meets that Van Horne girl every Sunday afternoon after he leaves Elkanah's. There. now! It's out, and I don't give a darn if they hang me for it."

Keziah turned white. She seized Mr. Pepper by the lapel of his Sunday coat and shook him.

"Grace Van Horne!" she cried. "Mr. Ellery meets Grace Van Horne on Sunday afternoons? Where?"

"Down in them pines back of Peters's pastur', on the aidge of the bank over the beach. He's met her there every Sunday for the last six weeks—longer, for what I know. I've watched 'em."

"You have? You have! You've dared to spy on— I think you're lying to me. I don't believe it."

"I ain't lyin'! It's so. I'll bet you anything they're there now, walkin' up and down and talkin'. What would I want to lie for? You come with me this minute and I'll show 'em to you."

In the desire to prove his veracity he was on his way to the door. But Keziah stepped in front of him.

"'Bish Pepper," she said slowly and fiercely, shaking a forefinger in his face, "you go straight home and stay there. Don't you breathe a word to a livin' soul of what you say ou've seen. Don't you even think it, or—or dream it. If you do I'll—I'll march straight to Laviny and tell her that you asked me to marry you. I will, as sure as you're shakin' in front of me this minute. Now you swear to me to keep still. Swear!"

"How—how'll I swear?" begged Kyan. "What do you say when you swear? I'll say it, Keziah. I'll say anything! I'll——"

"All right. Then mind you remember. Now clear out quick. I want to think. I must think. Go! Get out of my sight!"

Kyan went, glad to escape, but frightened to the soul of him. Keziah watched him until he turned from the main road into the lighthouse lane. Then, certain that he really was going straight home, she re-entered the parsonage and sat down in the nearest chair. For ten minutes she sat there, striving to grasp the situation. Then she rose and, putting on her bonnet and shawl, locked the dining-room door, and went out thru the kitchen. On the step she looked cautiously back to see if any of the neighbors were at their windows. But this was Sunday, the one day when Trumet people sat in their front parlors. The coast was clear. She hurried thru the back yard, and down the path leading across the fields. She was going to the pine grove by the shore, going to find out for herself if Kyan's astonishing story was true.

For if it was true, if the Rev. John Ellery was meeting clandestinely the adopted daughter of Eben Hammond, it meant—what might it not mean, in Trumet? If he had fallen in love with a Come-Outer, with Grace Van Horne of all people, if he should dare think of marrying her, it would mean the utter wreck of his career as a Regular clergyman. His own society would turn him out instantly. All sorts of things would be said, lies and scandal would be invented and believed. His character would be riddled by the Trumet gossips and the papers would publish the result broadcast.

And Grace! If she loved a Regular minister, what would happen to her? Captain Eben would turn her from his door, that was certain. Altho he idolized the girl, Keziah knew that he would never countenance such a marriage. And if Nat stood by Grace, as he would he almost sure to do, the breach between father and son would widen beyond healing. If it were merely a matter of personal selection, Mrs. Coffin would rather have seen her parson marry Grace than anyone else on earth. As it was, such a match must not be. It meant ruin for both. She must prevent the affair going further. She must break off the intimacy. She must save those two young people from making a mistake which would —She wrung her hands as she thought of it. Of her own sorrow and trouble she characteristically thought nothing now. Sacrifice of self was a part of Keziah's nature.

The pines were a deep-green blotch against the cloudy sky and the gloomy waters of the bay. She skirted the outlying clumps of bayberry and beach plum bushes and entered the grove. The pine needles made a soft carpet which deadened her footfalls, and the shadows beneath the boughs was thick and black. She tiptoed on until she reached the clearing by the brink of the bluff. No one was in sight. She drew a breath of relief. Kyan might be mistaken, after all.

Then she heard low voices. As she crouched at the edge of the grove, two figures passed slowly across the clearing, along the bush-bordered path and into the shrubbery beyond. John Ellery was walking with Grave Van Horne. He was holding her hand in his and they were talking very earnestly.

Keziah did not follow. What would have been the use? This was not the timo to speak. She knew now and she knew, also, that the responsibility was hers. She must go home at once, go home to be alone and to think. She tiptoed back thru the grove and across the fields.

Yet, if she had waited, she might have seen something else which would have been, at least, interesting. She had scarcely reached the outer edge of the grove when another figure passed stealthily along that narrow path by the bluff edge.

female figure treading very care- ully, rising to peer over the bush- at the minister and Grace. The gure of Miss Annabel Daniels, the "belle" of Trumet. And Annabel's ace was not pleasant to look upon.

CHAPTER XI

Which Captain Eben Receives a Caller

At the edge of the bluff, just here the pines and the bayberry ushes were thickest, where the nar- ow, crooked little footpath dipped ver the rise and down to the pas- ure land and the salt meadow, John llery and Grace had halted in their alk. The minister's face was pale, ut set and determined, and he was peaking rapidly.

"I can't help it," he said. "I can't elp it. I have made up my mind d nothing can change it, nothing ut you. It rests with you. If you y yes, then nothing else matters. ill you say it?"

He was holding both her hands ow, and tho she tried to withdraw hem, he would not let her.

"Will you?" he pleaded.

"I can't," she answered brokenly. can't. Think of your church and your people. What would they y if——"

"I don't care what they say."

"Oh! yes, you do. Not now, per- ps, but later you will. You don't ow Trumet as I know it. No, it's possible."

"I tell you there is only one im- sible thing. That is that I give u up. I won't do it. I can't do ! Grace, this is life and death for e. My church——"

He paused in spite of himself. His urch, his first church! He had ac- pted the call with pride and a de- rmination to do his best, the very st that was in him, for the so- ety and for the people whom he as to lead. Some of those people had learned to love; many of em, he felt sure, loved him. His ccess, his popularity, the growth the organization and the praise hich had come to him because of it, these had meant, and still meant, ry much to him. No wonder he used, but the pause was momen- ry.

"My church," he went on, "is my rk and I like it. I believe I've ne some good here and I hope to more. But no church shall say hom I shall marry. If you care me, Grace, and I think and hope u do, we'll face the church and the wn together and they will respect for it."

She shook her head.

"Some of them might respect ," she said. "They would say had been led into this by me and re not so much to blame. But I ——"

"They shall respect my wife," he terrupted, snapping his teeth to- ther, "or I'll know the reason y."

She smiled mournfully.

"I think they'll tell you the rea- ," she answered. "No, John, no! mustn't thing of it. You can see mustn't. This has all been a stake, a dreadful mistake, and I to blame for it."

"The only mistake has been our eting in this way. We should ve met openly; I realize it, and ve felt it for sometime. It was fault, not yours. I was afraid, uess. But I'll not be a coward any ger. Come, dear, let's not be raid another day. Only say you'll rry me and I'll proclaim it open- to-night— Yes, from the pulpit, you say so."

She hesitated and he took courage from her hesitation.

"Say it," he pleaded. "You will say it?"

"I can't! I can't! My uncle—"

"Your uncle shall hear it from me. We'll go to him together. I'll tell him myself. He worships you."

"Yes, I know. He does worship me. That's why I am sure he had rather see me dead than married to you, a Regular, and a Regular minister."

"I don't believe it. He can't be so unreasonable. If he is, then you shouldn't humor such bigotry."

"He has been my father for years, and a dear, kind father."

"I know. That's why I'm so certain we can make him understand. Come, dear! come! Why should you consider everyone else? Consider you own happiness. Consider mine."

She looked at him.

"I am considering yours," she said. "That is what I consider most of all. And, as for uncle, I know—I know he would never consent. His heart is set on something else. Nat——"

"Nat? Are you considering him, too? Is he to stand between us? What right has he to say——"

"Hush! hush! He hasn't said anything. But—but he and uncle have quarreled, just a little. I didn't tell you, but they have. And I think I know the reason. Nat is Uncle Eben's idol. If the quarrel should grow more serious, I believe it would break his heart. I couldn't bear to be the cause of that; I should never forgive myself."

"You the cause? How could you be the cause of a quarrel between those two? Grace, think of me."

Here was the selfishness of man and the unselfishness of woman answered.

"John," she said, "it is of you I am thinking. Everything else could —might be overcome, perhaps. But I must think of your future and your life. I must. That is why——"

He did not wait to hear more. He seized her in his arms and kissed her.

"Then you do care!" he cried joyfully. "You will marry me?"

For an instant she lay quiet in his embrace, receiving, if not responding to his caresses. Then she gently but firmly freed herself. He saw that there were tears in her eyes.

"Grace," he urged, "don't—don't hesitate any longer. You were meant to be my wife. We were brought together for just that. I know it. Come."

"Won't you?" he begged.

"I don't know," she sobbed. "Oh, I don't know! I must think—I must! Wait, please wait, John. Perhaps by tomorrow I can answer. I'll try —I'll try. Don't ask me again, now. Let me think. Oh, do!"

Doubtless he would have asked her again. He looked as if he meant to. But just then, drifting thru the twilight and the mist, came the sound of a bell, the bell of the Regular Church, ringing for the Sunday evening meeting. They both heard it.

"Oh!" exclaimed Grace, "that is your bell. You will be late. You must go, and so must I. Good night."

She started down the path. He hesitated, then ran after her.

"To-morrow?" he questioned eagerly. "Tomorrow, then, you'll say that you will?"

"Oh, perhaps, perhaps! I mustn't promise. Good night."

It was after seven when Grace reached the old tavern. The housekeeper, Mrs. Poundberry, was anxiously awaiting her. She wore her bonnet and Sunday gown and was evidently ready to go out.

"Land sakes alive!" she sputtered. "Where in the name of goodness have you been to? I was gettin' scairt. Didn't know but you'd run off and got married, or sunthin' dreadful."

Grace was thankful that the cloudy twilight made it impossible to see her face distinctly. The housekeeper rattled on without waiting for an answer.

"Supper's on the table and the kittle's abilin'. You better eat in a hurry, 'cause it's meetin' time now. Your uncle, he started ten minutes ago. I'm agoin' right along, too, but I ain't goin to meetin'; I'm agoin' up to Betsy E.'s to stay all night. She's got a spine in her back, as the feller said, and ain't feelin' good, so I told her I'd come and and stay a little spell. S'pose you can get along to-morrow without me?"

"Betsy E." was Mrs. Poundberry's second cousin, an elderly spinster living alone in a little house near the salt works. Grace assured her questioner that she could attend to the house and the meals during the following day, longer if the troublesome "spine" needed company. Mrs. Poundberry sighed, groaned, and shook her head.

"I shan't stay no longer," she affirmed; "not if Betsy's all over spines, like one of them Mexican cactus plants. No, marm, my place is right here and I know it. Your Uncle Eben's mighty feeble and peaked lately. He ain't long for this world, I'm afraid. You'd ought to be awful good to him, Gracie."

"I know it," was the hurried reply. "Where's Nat?"

"I don't know. Can't keep track of him. Might's well try to put your finger on a flea. He's here today and gone yesterday, as the Scriptur' says.

Good-by. Take care of yourself.

She had reached the gate by this time, and Grace shut off the flow of conversation by closing the door. Then she took a candle from the row on the dining-room mantel, lighted it, and went up to her own room. Standing before the old-fashioned bureau with its little oval mirror, she hastily arranged her hair. She did not wish to go to the prayer meeting at the chapel, but she felt that she must. The Come-Outer gatherings, with their noisy singing and shouting, had grown more and more repugnant to her.

And to-night, of all nights! How could she meet those people who had known her since she was a child, who boasted of her as one of their staunchest adherents, who believed in her and trusted her? How could she meet them and talk with them, knowing what she knew and realizing that they, too, would know it on the morrow? But her uncle would miss her and be worried about her if she did not come. She could not bear to trouble him now; she never loved him so dearly, was never so anxious to humor his every wish as on this, perhaps the last evening they would spend together. For, tho she would not yet admit it, even to herself, her decision was made, had really been made the first time John Ellery asked her weeks before. Only the thought of what might happen to him if she consented had caused her to hesitate so long.

She blew out the candle and was about to descend when she heard voices. The door of the dining room opened and closed. She felt certain that Nat had returned and wondered who was with him.

(Continued Next Week.)

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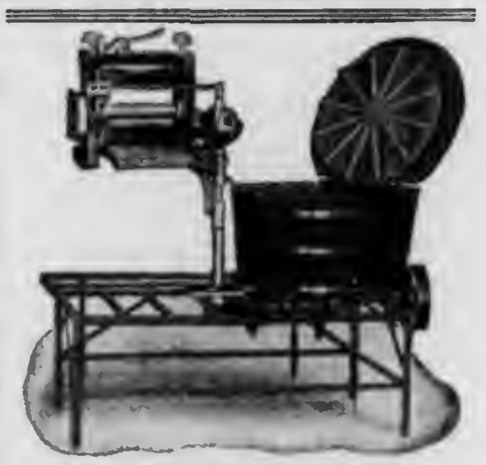

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POULTRY

DECEMBER POULTRY REMINDERS

If wet mashes are fed to the hens during the winter it pays to have the troughs hinged to the sides of the poultry house so they can be raised and hooked to the wall when not in use. Feed the hens only the amount they will eat in a short time so that none will be wasted. When wet mash is fed in shallow pans and allowed to remain in the house for several hours it may become very unclean. In general we do not favor a wet mash but when there is an abundance of table scraps to use they can be mixed with the mash and fed hot on cold winter days.

Green food is a tonic that the hens need in the winter. Sprouted oats are fine but more expensive than mangels. Cull vegetables and cabbages are first class green food. Clover is one of our best poultry feeds. It sometimes seems like a lot of work to prepare green food for the hens but it brings results and helps to keep the birds in condition to produce hatchable eggs in the spring. The green food can often be cut and boiled and mixed with the mash to make it more palatable.

It is only a few weeks until incubating and brooding worries will arrive on the poultry farm. But the pullets that were hatched early last spring are the birds that lay valuable eggs now. And that makes early hatching worth the effort. It is a good plan to check over the equipment and map out the hatching and brooding campaign for the season. If more equipment will be needed it should be ordered early to avoid the disappointment which comes from delayed shipments.

After placing the male birds with the breeding flocks it is best to wait about two weeks before assuming that the eggs will be fertile. Probably they will be fertile before that time but the producer must be sure that a large percent of the eggs are fertile if they are to be sold for hatching purposes. Be sure that the male birds come thru the winter in good condition or the eggs will not hatch into vigorous chicks. During the winter it pays to give the male birds an occasional inspection to see that they are in good flesh and free from disease. Good breeding cockerels will be scarce next spring and if any are needed it is best to buy them at once as the price grows higher while the birds available become fewer every day.

Most of the poultry diseases are caused by a lack of simple precautions. A roof that leaks makes a damp litter on the floor. Cracks in the poultry house cause draughts. A lack of clean litter means that the scratch grain is not hidden and a lack of exercise reduces the vigor of the flock. Unless a balanced ration is used digestive disorders are apt to occur. Grit is needed to grind the feed. A tightly closed house is damp and the birds lose in vitality from the lack of fresh air. Colds are caused by dusty houses and exposure to winds and cold rains.

When more good pullets are raised than the farm poultry house will accommodate they can sometimes be profitably retained by adding a scratching shed to the house. The shed can be entirely open on the south but covered with poultry wire. Clean sand on the floor will be better than garden loam. Then straw or shredded corn fodder can be thrown in the scratching shed and it gives the hens a sort of pleasant vacation to get out of the roosting and laying house and into the scratching shed. Of course the house must not be overcrowded but the addition of the shed makes the conditions better for the hens in a house that is filled to capacity or a little more.

A friend asks if poultrymen will ever strike. Probably those that are now in the business will not strike as it seems as if the conditions have improved. But during the last five years a good many poultrymen have practically struck and sold their birds and closed the houses. The wages were not good enough in the poultry business and many of them had to quit and obtain employment in some other line that paid better. Many employees on poultry farms have practically gone on a strike by finding better-paid work in factories. Today many consumers are not eating fresh eggs because eggs were not high enough two or three years ago to warrant certain producers in keeping their hens. But poultrymen have tried to do their best. They have never started a strike for higher wages. And most of them that left the business did so because they found that eggs were not paying the cost of production on their particular plants. In general poultry production is much like any other kind of farming and a man hesitates to strike when he ruins his own business by so doing.

Cooling Dressed Poultry Before Packing

Feather eating starts among overcrowded birds that do not receive a balanced ration. Isolate the first ones that are caught in the act, as they may teach the habit to other birds. We have never seen a case of feather eating in a well managed flock but have noted it several times where small flocks were kept in little bare yards in the city. Boiling tobacco leaves in water and putting the mixture on the feathers is reported to have broken birds of the habit. But it is better still to manage the birds right so that the habit will not start.

In the winter the well managed poultry flock will be as free from disease as during the summer if the birds are given sanitary houses and clean food and water. If birds become sick it means much fussing and doctoring. A poultryman might as well leave the business at once as to neglect preventive measures and expect to make it up by doctoring of the sick birds.

A visit to a poultry show is apt to stimulate the farmer's interest in his own birds. Talks with experienced poultrymen are bound to bring out points of value which can be applied in a practical manner. Often a poultryman who has never written an article can tell of his own experiences in a way that is worth money to the practical poultry breeder. Such men are met at the poultry shows and it is a pleasure to talk with them.—R. G. Kirby.

DEMAND FOR RABBIT PELTS

State Game Warden Le Compte believes that Marylanders this season, will bag the greatest number of rabbits in the sporting history of the State. He also has good reason to believe that the numerous pelts from these little animals will find a ready sale. Rabbit fur used to be so cheap that saving and collecting it was unprofitable. Now they are used extensively by hat makers and have advanced in price. Rabbit skins to the number of 10,000,000 are desired by an eastern firm and it would have as many as possible from this country. Seven or eight skins will make a pound. They are bought by the pound. Anyone desiring information as to names and addresses of would-be-purchasers need only to write to the United States Department of Agriculture. The boy who is a successful trapper has a chance to make a little money. This eastern firm wants that great number of skins in 1919 and 1920—Marylander

WINTER PROTECTION FOR BEES

Bees need protection from the elements just the same as poultry and live stock. If you have a few colonies of bees or a well equipped apiary, provision should be made to give winter protection.

The honey bee is one insect which does not hibernate. It remains active, and feeds thruout the winter. In cold weather the worker bees form a spherical mass or cluster. On the inside of this mass is the queen and many workers which generate heat by muscular activity. The workers on the outside of the mass serve as a blanket to retain the heat. The cluster encloses also parts of the honey combs filled with honey which is consumed by the heat producers. When the temperature of the hive approaches 55 degrees Fahrenheit, the cluster is formed; at a higher temperature no cluster is formed.

For ideal wintering the temperature inside the hive should be kept just above the temperature at which the cluster is formed. Then the workers consume the least amount of food and do the least amount of work producing heat. Where little food is consumed and little work is done the colony remains practically in a state of rest during the winter. Such a colony comes out in better shape than does a colony which consumers food as fuel and works itself to death keeping warm.

Winter protection should be planned, therefore, so as to maintain a fairly uniform temperature inside the hive and prevent sudden temperature changes. For best results dry packing, such as leaves, chaff, straw, saw dust or similar material should be provided. To hold this in place a rough packing case may be constructed around one of several colonies as units. Some line up the hives in rows facing south, use boards to form a case to hold in place the packing and cover with roofing felt. Others build a case around four colonies, two facing west and two east. Where a packing case is used provision is made for ventilation and so that in warm weather the bees can come out and take flights. From four to eight inches of packing should be used under, around and over the hives for best results.

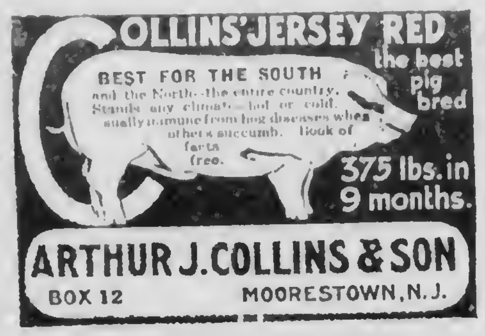
Where perfect protection cannot be given, protect the hives from winter wind by all means. Chicken coops may be used over hives as some protection. Hives may be wrapped with one or more layers of heavy waterproof paper. Fodder may be carefully stood up around and over hives facing south. No reasonable protection is too good for bees and the best that can conveniently be given should be applied in every case. Bring all bees thru the winter in the best possible shape, for prospects are now good for a heavy clover honey crop in Missouri next year.—Mo. College of Agriculture.

PLATFORM OF FARM BUREAU FEDERATION

Reasserting its primary purpose of strengthening and promoting the work of country farm bureaus and their supporting county and state associations, in ringing resolutions the Farm Bureau convention also declared for loyalty to American institutions, against any affiliation with organized labor, recognized the farmer's responsibility for the stewardship of the land and his obligation to maintain soil fertility, commended the work of agricultural colleges and the economic, farm management and crop estimating work of the United States Department of Agriculture, and vigorously asserted the farmer's right to the costs of production.

Good Type W. P. Rock Hen

Because it is winter is no reason why the hen house should be made air-tight. How can the hens get a breath of air in such a place?



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BEST FOR THE SOUTH and the North—the entire country. Stands any climate—hot or cold. Usually immune from hog diseases when others succumb. Book of facts free.

375 lbs. in 9 months.

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Bargain in Berkshires

In order to reduce our herd we are offering bred sows, boars ready for service, boar and sow pigs of all ages at prices that will effect a ready sale. If you wish to increase your herd or found a herd of Berkshires, we offer you an excellent opportunity. Your inquiries or visit will amply repay you. CRESTMONT FARM, Sunbury, Pa.

BERKSHIRES from the best blood strain as Longfellow Double and Lord Premier Successor strains, both having been grand champions. One 6 months old grandson of Longfellow Double, several servicable boars, and both bred and open gilts of the Successor strain. Also 10 weeks old pigs, sired by a son of Rival's Baron Duke 2d that weighed over 900 lbs., dam of sire being Maybelle of W. O. Several pure bred Jersey and Ayrshire bulls, 2 to 6 months old. OLD FORGE FARM, SPRING GROVE, PA., C. R. FREED, Mgr.

REGISTERED DUROC-JERSEY PIGS $10 each while they last, all from imported Southern stock, none better. Bargains in bred gilts, service boars, brood sows and spring pigs. C. W. Ellis, Jr., Maple Lawn Farm, Cortland, N. Y.

Fashion Herd of Big Type Poland Chinas Spring boars ready for service, fit to head well-bred herds, sired by Giant Smooth Wonder and Ohio King 2nd, out of 700 and 800 lb. sows. Also grand lot Fall pigs, same breeding. Sows being bred for spring farrow. Prices on app. C. S. Eppley, Zanesville, O.

HAMPSHIRES All ages, free circular. Reg. Guernsey Bull Calves from tested herd. LOCUST LAWN FARM, BIRD-IN-HAND, BOX 2, LANC. CO., PA.

HAMPSHIRES All ages. Strong and vigorous stock. When you buy you want the best, don't you? Then write us. Inspection invited. ROSS B. WITMER, LAMPETER, PA. Member Lanc. Hampshire Breeders' Co-operative Association.

REGISTERED DUROCS for sale. All ages. Bred to please. Best blood lines. NORTHUMBERLAND COUNTY DUROC-JERSEY BREEDERS ASSN., J. M. FRY, Coresponding Secretary, SUNBURY, PA.

POLAND-CHINA PIGS Registered Breeding Prospects, from the Big-Ben and Disher's Giant Families, that competitors do not equal. DR. KNOX, BOX 50, DANBURY, CONN.

Edgewood Hampshires, spring boars sired by our prize winning and Grand Champion boars. Make the right buy today and get a good one, either for Hampshire breeding or for a cross on your other sows. Depaw Head, Edgewood Farm, Marion, O.

C. W. Herd Boar Will sell our herd boar or exchange for Berkshire boar. A sure breeder, but can't use him in our herd any longer. A bargain for someone. Photo on request. EARLE F. HOFFMAN, GRATZ, PA.

Special Boar Sale Registered Duroc Jerseys of highest class champion blood lines. Ready for service in two sizes at $40 and $50 each, registered. BELROSE STOCK FARMS, RICHFORD, N. Y.

GRADE PIGS 2 to 3 months old for feeders. I. R. TANGER, YORK SPRINGS, PA.

REG. DUROCS Large size, heavy bone, best blood lines, prices reasonable, satisfaction guaranteed. JOHN W. COX & SON, New Wilmington, Pa.

50 REG. DUROCS AT PUBLIC SALE, MARCH 6, 1920. Herd boars, bred sows, fall gilts and boars. Get on list for catalog. SLATY RIDGE FARM, PALMYRA, PA., BOX 5.

TARRYMOOR BERKSHIRES Quality Growthiness Prolificacy We guarantee satisfaction. Robt. E. Atkinson, Wrightstown, Pa. Bell Phone.

BOARS Reg. O. I. C. and C. W. Ready for service, two sizes at $40 and $50 each. Order direct. Guarantee satisfaction and safe delivery. JOHN L. VAN HORN, TROY, PA.

DUROCS and P. C. PIGS $30 Pair Pedigree. Not akin. S. O. WEEKS, DeGraff, Ohio.

Chester Whites Pigs for sale. Special price on boar pigs. All stock registered. ALLAN R. MORTON, ASHVILLE, N. Y.

Chester Whites. Spring boars, bred gilts, and trios from some of the best blood lines. Immuned. Also good fall pigs. C. J. Stough & Sons, R 1, Findlay, O.

Reg. Big Type SPOTTED POLAND-CHINA pigs, bred from a son of O. K.'s Pride No. 30. H. C. KYMER, R. 4, Shippensburg, Penn'a.

BERKSHIRES Superior, Epocal, Rival Champion Blood. Pigs $15 and up. O. D. BARNES, R. D. 11, Grove City, Pa.

REG. O. I. C.'S ALL AGES. Booking orders for September, October and November Pigs. BLACK DIAMOND MINORCA FARM, MT. BETHEL, PA.

BERKSHIRES AND CHESTER WHITES All ages, for sale; write your wants; we can please you. TWIN BROOK FARM, NEWVILLE, PA.

BIG TYPE POLAND CHINA PIGS 3 months old. Sired by Longfellow 103751. W. C. KEYSOR, GREENWICH, OHIO.

Large Berkshire Swine Registered High Grade. Prices reasonable. Write HOME FARM, CENTER VALLEY, PA.

Berkshire Bargain. Three year old Shenandoah "O" Belchester Prince 4th and 2 bred sows $200. All reg. L. C. TOMKINS, ELLENTON, PA.

Durocs, all im. Yearling and Fall yearling boar and Fall boars. Fall gilts, bred for Aug., Sept. and Oct. Spring pigs, e. sex. I. D. Jackson, R. 10, V. Wert, O.

CHESHIRES.—The high-quality home-market and home-table breed. Our type pleases. Pigs and service boars. Morningside Farm, Sylvania, Pa.

Three Reg. Berkshire Boars and four reg. Berkshire sows for sale. Best pedigreed stock. PINEBROOK FARMS, PAOLI, CHESTER CO., PA.

Veterinary

Conducted by W. C. Fair, V. S.

Advice thru this department is free to our subscribers. Each communication should state history and symptoms of the case in full, also the name and address of writer. Initials only will be published. We cannot make reply by mail. This is one of the most valuable columns of the paper and we invite readers to make use of it. Clippings from this column, when properly preserved and classified, make one of the most valuable medical symposiums a farmer-stockman can obtain.

Heaves.—Teat Obstruction.—I would like to know thru veterinary department of your paper if there is any permanent cure for chronic heaves? I have a 7-year old draft horse that has been troubled with heaves for the past 9 months. I have given him commercial heave remedies, but they have only helped modify his symptoms. Will you tell me what to give and how to feed him? I also have a fine grade Holstein cow with second calf, that seems to have a sort of air gland in teat. It has a spongy feel and the tinner parts of teat are thickened. This is obstructing the free flow of milk and in order to draw milk, I have to strip her. Whatever this obstruction is it seems to shift position, after she is partly milked, and when milked clean can't be felt. It doesn't seem to give the cow any pain or do any other harm, other than the inconvenience in milking.—A. B. Hegins, Pa. Incipient heaves can very often be relieved, but chronic heaves are considered incurable; however, the object in treating an allment of this kind should be to make the animal more comfortable, prevent him growing worse and becoming unfit for moderate work. Feed no clover or musty, dusty, badly cured fodder of any kind, but allow him to have a small quantity of well cured timothy or clean straw. Feed him plenty of grain and roots; this is the best winter feed for a broken winded horse. Give ½ dram fluid extract lobelia, ½ dram fluid extract belladona, ½ oz. Fowler's Solution at dose in feed or water 3 times a day. It must, however, be born in mind that all medical treatment is of secondary consideration; careful attention paid to diet is of the greatest importance Broken-winded mares should never be used for breeding purposes, as a pre-disposition to the disease might perhaps be inherited. If the bowels are inclined to become constipated. give raw linseed oil to open them. Mixing molasses in the feed has good effect and don't forget to feed carrots, potatoes, turnips, or other roots with the grain; also, dampen fodder. Water before feeding. Exercise him daily, see that his stable is well supplied with fresh air. Bandage teat, but avoid too much pressure, and apply it to dilated part.

Too Much Bowel Action.—Lice.—I have a cow, due to freshen about Feb. 1st, troubled with looseness of the bowels. She is fast growing thin, but seems to be healthy. Will you tell me what will kill lice on cattle?—A. L. K., Pottsgrove, Pa. Give her a teaspoonful dried powdered sulphate of iron, a table spoonful ginger and the same quantity of powdered gentian in feed 3 times a day. She should be kept quiet, as exercise increases bowel action. Water her often and feed her a good quality of food. Three species of lice, two of them sucking lice, the shortnosed cattle louse, the longnosed cattle louse, commonly known as blue lice and one biting louse, commonly known as red louse, affect cattle. The bluelice suck the blood of cattle and are more injurious than the red lice. One part kerosine and two parts lard smeared on the body occassionally is fairly effectual. A favorite with many cattle owners is kerosine emulsion, made by dissolving two pints of soft soap in an equal quantity of boiling water, adding one pint of kerosene. This mixture should be either stirred or churned violently, then add 3 quarts more water and apply. The stable should be cleaned and washed with fresh lime-wash, or a disinfectant that will kill lice. Pure kerosine will kill lice, but of course it is too strong and will take off hair, if applied to cattle.

The sire can make or break the herd. Send the scrubs to the butcher's block.

Facts in BLACK & WHITE

Yearly Butterfat Production for the 10 Highest Record Cows of Each Breed

HOLSTEIN-FRIESIAN COWS	1,091 lbs
Guernsey Cows	976 lbs
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Average yearly yield for all cows in the U. S. 166 lbs.

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REGISTERED HOLSTEINS 40 heifer calves, 2 to 10 mos. old, $90 to $125 each or the lot for $100 each. 28 granddaughters of King of Pontiacs, 2 to 3 yrs. old bred. 15 other reg. heifers. 20 reg. bulls, 2 to 18 mos. old. Reg. cows, high-grade cows and 100 high-grade 2-yr.-old heifers due to freshen this winter. ⅞ Holstein heifer calves. Also 27 lb. son of King of Pontiacs. J. C. Reagan, Tully, N. Y.

STEVENS' HOLSTEIN FARM OF CORTLAND, N. Y. King Korndyke Sadie Vale Jr., No. 20391, two nearest dams averaging 36 pounds of butter in 7 days, heads my herd. Butter records from 17 pounds two-year-olds to 34 pounds at full age. Also high grade Holstein calves, either sex, $15.00 each. Write your wants. PAUL H. STEVENS, Prop.

Oakhurst Farm Ayrshires present offering —20 young cows of the choicest strains, bred to freshen this winter and spring in calf to a high-class bull. GUY D. POWER & SON, Auburn, N. Y.

WE WILL GIVE THE USE OF A **Finely Bred Reg. Holstein Bull Calf** for three years to any responsible farmer who wishes to improve his herd. Mugget Hill Farm, Charlton, Mass.

HIGH GRADE HOLSTEIN CALVES. Either sex. Shipped anywhere. Write for prices. Satisfaction and safe delivery guaranteed. FRANK GAMEL, PINE GROVE FARM, LOCKE, N. Y.

HOLSTEIN BULLS Nearly ready for service. With all papers, $75 to $100. B. Smith & Son, Granville Summit, Pa.

For Sale—Reg. Guernsey bulls, out of a good dam, a grandson of Longwater Royal. Reasonable. HAYES C. TAYLOR, EMBREEVILLE, PA.

Registered Holstein Friesian Cattle Sons of the great Finderne Sir Valdessa, a 37 lb. bull, for sale. MILLARD E. BASEHOAR, Littlestown, Pa.

Holstein Bull Calves $25 each, 5 days old, unregistered. $30 each with papers. High producing reg. dams and sires. L. C. TOMKINS, ELLENTON, PA.

GUERNSEYS

BUTTER FAT AT LOWER COST PER LB. No other breed can produce rich golden butter fat as cheaply as the Guernsey. Official yearly records show —one cow has given 24,008 lbs. milk and 1,098 lbs. butter fat. Write for our free booklets. The American Guernsey Cattle Club Box M 40 Peterboro, N. H.

QUALITY ECONOMY QUANTITY

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BEST in High grades and Registered Holsteins. Elegant high grade calves $25 each. With ten calves will give choice registered bull free. Will accept Liberty Bonds and W. S. S. at par. Guarantee safe arrival and gladly ship C. O. D. Write your wants. C. W. ELLIS, JR., Cortland, N. Y.

Special Sale of Ayrshires Few choice bull calves—A couple fine young cows, priced very reasonable to effect ready sale. Bull calves from fine A. R. cows, or cows now on test for Advanced Registry. Excellent opportunity to found a herd of high class Ayrshires. Your inquiries and visit to the farm will repay you. CRESTMONT FARM, SUNBURY, PA.

HOLSTEINS that test 4% OF FAT FOR THE YEAR'S MILK PRODUCTION. Grandsons of the ONLY COW of ANY BREED—ANYWHERE—that ever made two consecutive yearly records under full age that average over 24,000 lbs. of 4% milk, 1200 lbs. of butter each year—one year strictly official. Three months bull calves $100 and up; service bulls $150 and up. GEO. E. STEVENSON & SONS, CLARKS SUMMIT, PA.

Holstein Bulls Ready For Service Two are coming two years old, one three years. Better see these bulls; see the size and milking ability of dams and the remarkable calves the older one is getting. They have been raised under ideal conditions and are priced right. PLUMLYN FARM, Fairview Village (near Norristown), Pa.

Holstein Heifer Calves By pure bred sire and high-grade big producing cows. Beautifully marked. Splendid individuals, $20 up. Browncroft Farms, McGraw, N. Y.

FOR SALE: 3 CHOICE REG. GUERNSEY BULL Calves, 6 months old, May Rose breeding. Dams now on test. $75 each. Riverview Farms, Swarthmore, Pa.

Ayrshire Bull Calves From high record A. R. Dams ROBERT TEMPLETON & SON, ULSTER, PA.

Registered Holstein and Guernsey bulls from calves to serviceable age. 250 animals in the herd. BONNYMEADS FARMS, R. D. 1, Harrisburg, Pa.

Milking Shorthorns Bull Calves sired by Glenside Royal Stamp for sale. C. M. KENNEDY & SONS, Ulster, Bradford Co., Pa.

Reg. Holstein Heifer Calves, from officially tested dams and a 30 lb. sire. Write for prices, pictures and peds. Walter M. Cruttenden, Wilkes-Barre, Pa.

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Poultry

LOOK BABY CHICKS $17 A 100 UP By Special Delivery Parcel Post, postpaid 20 different thorobred breeds. Utility & Exhibition grades. Live delivery guaranteed. Capacity 100,000 weekly. Catalog free. Nabob Hatcheries, Gambier, Ohio.

Tiffany's Superior Chicks That live. Silver, White, and Columbian Wyandottes. Buff, Barred, and White Rocks. R. I. Reds. White and Brown Leghorns. Pekin, Rouen, and Indian Runner Ducklings (heavy type). Aldham Poultry Farm, R. 39, Phoenixville, Pa.

SHUMAKER'S WORLD'S FAVORITE White and Barred Plymouth Rocks and S. C. White Leghorn pullets $3 each, cockerels $4 each. Order now, satisfaction guaranteed. J. H. SHUMAKER, GLENCOE, PA.

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Barred Plymouth Rocks (Pullet line) Buttercups and Ancona Cockerels. Also limited supply of pullets. Prices reas. J. K. Cadwallader, Wellsville, Pa. R. 1.

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WHITE LEGHORN LAYING PULLETS. YEARLINGS. Best strains, excellent stock, heavy layers. FOREST FARM, ROCKAWAY, N. J.

Barred Rock COCKERELS good strains, $3.00 to $4.00 each. J. I. HERETER, Gettysburg, Pa., R. 4.

200,000 Chicks—for 1920. Now is the time to place your order, prices reasonable. Sat. and safe delivery guar. Cata. free. Keystone Hatchery, Richfield, Pa.

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Reg. O. I. C. and C. W. Pigs, Bred gilts and sows Satisfaction and safe delivery guaranteed. JOHN L. VAN HORN, TROY, PA.

DUROC JERSEY MARCH SERVICE BOARS, July pigs, Colonial and Orion Cherry King breeding. Prices right. GEO. W. CRIM, Uhrichsville, Ohio.

REGISTERED O. I. C. Herd Boar for sale, sure breeder. Also booking orders for Aug. and Sept. Pigs. BENJ. H. RUTLEDGE, Honesdale, Pa. R. 3.

Big Type O. I. C.'s Serviceable boars. Gilts of all ages. Fall pigs. G. P. ANDREWS, DANSVILLE, MICH.

O. I. C. and CHESTER WHITE Fall Pigs and Bred Sows. Good individuals. Popular breeding. Reg. free. SPRING VALLEY FARM, MEMPHIS, N. Y.

O. I. C. Males 2 and 3 months old. Big, smooth kind. Reg. free. BRUBAKER BROS., Star R. Cocolamus, Pa.

Reg. Poland Chinas Choice Spring gilts and boars. Aug. and Sept. pigs shipped on approval. R. H. LYLE, Cadiz, Ohio.

Chester Whites Boar and Sow Pigs. Bred Sows. Collie dogs. ARCADIA FARM, BOX D, BALLY, PA.

Reg. O. I. C. Pigs for sale, 3 months old, either sex. Write your wants. A. J. Marshall, Oakland Farm, Williamsport, Pa. R.1

Large Berkshires Registered. May farrow, also October pigs. Both sexes. Prices reasonable. C. H. TOLAND, FREEPORT, OHIO.

For Sale—1 Reg. O. I. C. Boar, 16 mos. old. 1 Reg. O. I. C. Sow, 2 yrs. old, with pig. 1 Grade Sow, 3 yrs. old, with pig. B. A. Corkran, Midlothian, Va.

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PENNSYLVANIA FARMER
AGRICULTURE
THE KEYSTONE OF
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Teachings of the Pennsylvania Plats

An Interpretation of the Results of the Country's Oldest Experiment

By PROF. E. L. WORTHEN, Cornell University

Experimental Plats at Pennsylvania State College. The Oldest in America

A recent interpretation of the results of the Old Pennsylvania Plat Experiment has been published in one of our eastern farm journals in support of what is claimed to be a new fertilizer theory. The conclusions arrived at are in many cases at variance with those drawn by the able and conscientious men who have devoted years to the careful conduct of this most valuable piece of work, and the article even goes so far as to question their sound judgment in interpreting the results of their own investigations. While many farmers in Pennsylvania and adjoining states are personally acquainted with this experiment and know the practical application of the results, there are others who are less familiar with what has been done. Certainly, under the circumstances, a conservative study of these results from a practical standpoint should be of interest and of value to every man producing corn, oats, wheat and clover in the eastern states.

A Poor System of Farming Followed

Unfortunately, the system of farming followed on these plats is not one that could be recommended today. The crops are all removed from the land and no organic matter retained except that in the roots and stubble of the crops. It is true that manure has been applied to four plats in each tier, but in no case has fertilizer of any kind been used with the manure. It is likewise true that lime has never been applied with any of the fertilizer applications. The treatments have in no case materially increased yields, and generally the yields have gone down. Even the larger yields are below those necessary for really profitable crop production. We might say that the experiment furnishes information relative to the value of lime, fertilizer and manure, used separately, in connection with a system of farming condemned because inadequate for profitable soil utilization.

Phosphorus the Controlling Factor

It has been conclusively shown as explained by Gardner and Noll in Bulletin 146 of the Pennsylvania Station, that phosphorus or phosphoric acid has been the controlling plant-food. Not on account of the chemical composition of the soil, as intimated in the "New Fertilizer Theory" article, but simply because there has been practically no increase in yield from an application of any other fertilizing material nor from lime. That is, it has been found that an application of phosphorus is absolutely necessary before other treatments were beneficial.

Phosphorus, whether used alone or in combination with other plant-foods, has always given a good profit. At normal prices, the profit has ranged from 300 to 600 percent on the investment. The results are conclusive in showing that we cannot hope for maximum returns unless phosphorus is applied as a regular system of soil treatment. Even at the present high price of acid phosphate and rock phosphate, their use cannot be discontinued or even materially reduced without a corresponding decrease in net profit.

Commercial Nitrogen Not Profitable

Even tho the system of farming has been a nitrogen exhausting one in that all organic matter has been removed, commercial nitrogen whether applied as dried blood, nitrate of soda or sulfate of ammonia, has not been profitable. In this connection, it is well to keep in mind the fact that the soil has become very acid where sulfate of ammonia has been applied, and moderately so where dried blood has been used. The proper use of lime with these nitrogenous materials would have helped them, tho we have no grounds to believe that they would have returned a profit even when accompanied by lime. In case of nitrate of soda, which has not increased acidity, better financial returns have resulted, and even a small profit secured from the wheat and hay crops where the lighter rate of application (150 lbs.) to the acre every other year was made. Nitrate of soda in heavier applications has been used at a loss in all cases.

If the crops produced were fed on the farm and the resulting manure conserved and applied to the soil, more actual nitrogen would have been furnished than by the 150 pound application of nitrate of soda. The most valuable conclusion in respect to the nitrogen problem is that yields have been nearly as high on the average, and far more profitable where phosphoric acid and potash have been applied without nitrogen. Certainly, under a system of crop distribution that would return considerable amounts of nitrogen to the soil in manure, green manure crops, or crop residues, there would be no chance for the profitable use of commercial nitrogen.

In three instances manure has been applied alone, and in one along with burned lime, but in no case has its use been accompanied by any kind of a fertilizer. The original idea was to compare the value of manure with that of a mixed fertilizer rather than to determine the proper combination of commercial plant-food with manure.

Manure has compared favorably with fertilizers but the rate of application has in all cases been heavier than could have been made in practice unless feed had been purchased to supplement that produced on the farm. The purchase of feed—particularly roughage — and bedding would make possible the production of at least the smallest rate of application—six tons every other year.

As would naturally be expected, greater returns per ton of manure have resulted from the lightest rate of application. This is in accord with the principle which holds for all fertilizing materials. However, it does not necessarily mean that a heavier rate should not be used when the manure is available.

The results show that at normal prices of crops the farm manure, based on crop increases secured, would be worth from about $2.29 to $3.29 per ton, depending on the rate at which it was applied. At present prices of produce, it should be worth about double these amounts—approximately $4 to $6 a ton. It is also of interest to note that on the manured plats clover is still being grown very successfully where no lime has been added. Either with or without lime, farm manuring is a great help in getting a good seeding of clover, particularly on poor land. Still, where burned lime has been used with manure, better returns have resulted not only with clover but all crops in rotation. While manure may replace lime to some extent for clover, best results cannot be expected until lime is supplied in addition to manure.

Burned Lime and Ground Limestone

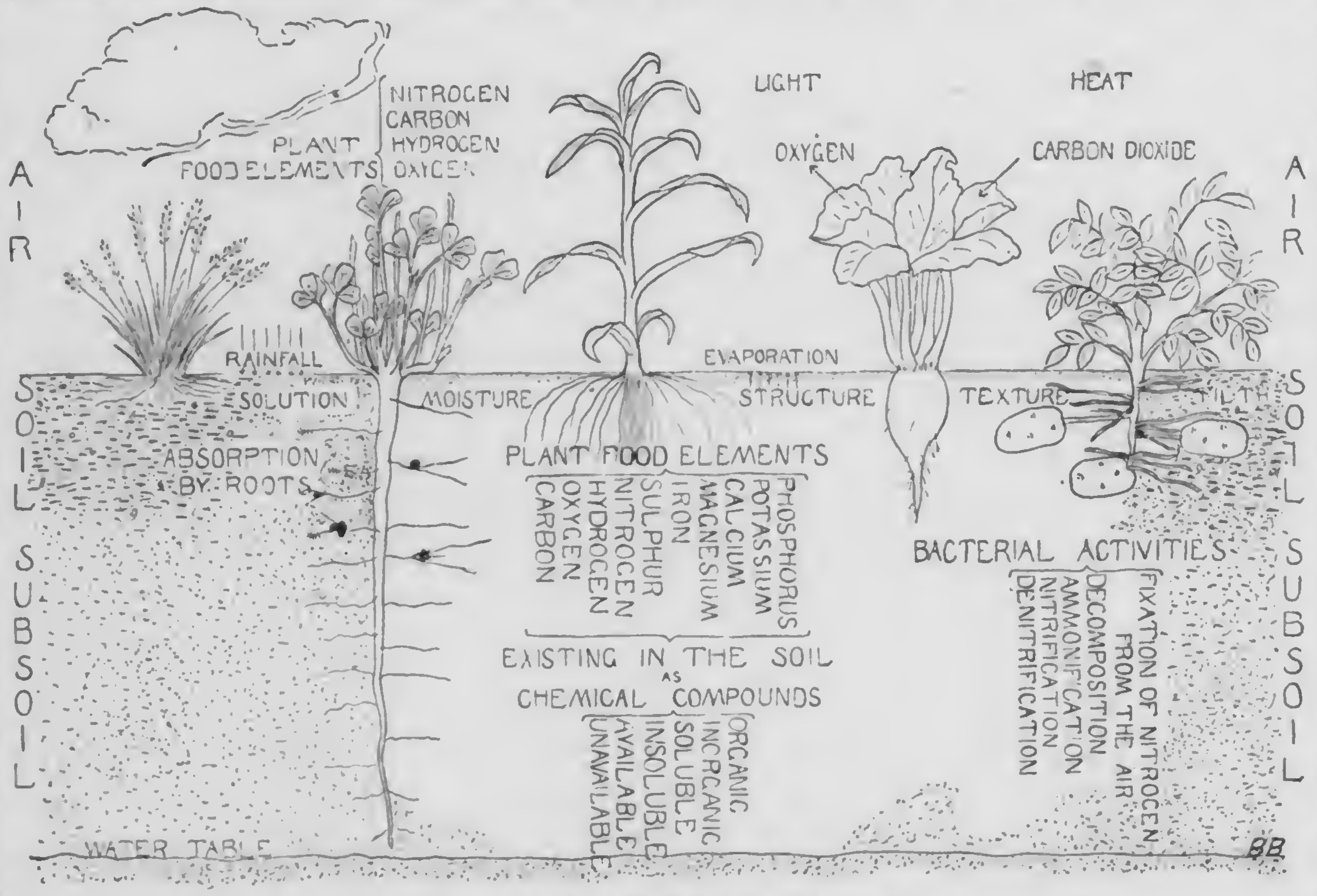
Unfortunately, lime has not been used with fertilizers. In one instance burned lime has been applied in addition to farm manure. The rate of application has been too heavy to be practical and even tho somewhat beneficial, never did a profit result from its use. The results show conclusively that neither ground lime stone nor burned lime when used alone, will materially lessen the rate of depletion of a soil. Even when burned lime has been used along with an application of farm manure, the soil has not gained in productivity. The negative results secured by the improper use of lime could be interpreted as emphasizing the fact that profit from lime comes only where it is used properly, that is, as part of a systematic plan of soil treatment.

Potash

The application of muriate of potash, in addition to phosphoric acid or both phosphoric acid and potash, in the potash robbing system of farming, has been beneficial and even profitable. By no possible comparison can it be shown that potash, even under these most favorable conditions has been used with any where near the profit secured from the phosphoric acid. There has been only one rate of application of potash—100 lbs. of muriate every other year—and, therefore, the results do not furnish information as to the most profitable rate of application.

It is on these results that at best are inconclusive, so far as showing the value of commercial potash in a good system of farming is concerned, that the so-called "New Fertilizer Theory" is based. On them alone the claim is made that under all conditions potash should be used at the rate of 2.08 pounds for each pound of phosphoric acid. Any system of fertilization in which this proportion between potash and phosphoric acid did not exist would be "scrapped" as being antiquated. The soil requirement, we are told, has absolutely nothing to do with it. Whether fertilizing grain crops on the brown prairies of the corn belt, which are still capable of growing a hundred bushel yield of corn and oats and 50 bushels of wheat without ever having received a pound of commercial potash, or on some of the potash hungry soils of the east and south, this same 2.08 to 1 ratio must be adhered to. Such teachings by a farm paper justifies a suspicion on the part of its constituents as to whether the real object is to aid in the more profitable use of fertilizer, or to ventilate an unscientific theory.

Fortunately, few farmers have such favorable conditions for the use of potash as furnished by the Pennsylvania plats. The great bulk of the potash is returned to the soil from year to year in the form of manure, green manure crops and crop residues. In fact, if the crop residues alone had been returned in case of the Pennsylvania experiment, even tho both grain and hay were sold, one-third as much potash would have been returned to the soil as was applied by the muriate. If the crops other than wheat had been fed to live stock, or used as bedding and the manure conserved, over one-half of the potash application would have been returned in farm-produced material. Certainly, any intelligent interpretation of the teachings of these results would not lead to the recommending, irrespective of the system of farming practiced, the universal application of 1331 pounds of muriate or 5324 pounds of kainit for every ton of acid phosphate.



Indicating the Sources of Plant Nutrition

Considering the conditions under which commercial potash has been used in the Pennsylvania experiment, it is rather striking that it has not given better results. Certainly, they furnish no conclusive evidence contrary to the experience of our better farmers, namely, that with a system of farming which returns the organic matter of the roughage produced, the potash problem is adequately solved for grain and hay crops on most soils. The experience of many farmers, as well as statistics of total grain production during the war, upholds the statement made when we were first confronted with the potash shortage, that, "The general farmer would be benefited and not injured by a shortage of potash, because he would find that greater returns would be secured by investing his potash money in additional phosphoric acid."

The New Pennsylvania Experiment

Appreciating the limitations of the old Fertilizer Experiment at the Pennsylvania State College, those now responsible for furnishing the definite information needed for the practical fertilization of Pennsylvania soils, have established a new plat experiment even more extensive than the old one. The plan differs from the old one in that various fertilizer combinations are to be used not alone but in connection with liming to control acidity and the application of farm manure and crop residues in amounts that could not be produced by the crops grown. Especial emphasis will be placed on the phosphorus problem and the different standard phosphatic fertilizers will be compared in different rates of application in connection with a system of farming which includes liming and manuring as regular systematic practices.

Practical Application of the Plat Results

It has been conclusively shown both by experimentation and by practical experience of farmers, that little will be gained by depending solely on fertilizers in soil utilization and improvement. It has, of course, become just as evident that the proper use of commercial plant-food is an absolute essential for the most profitable returns where the soil is being properly cropped, limed and manured. There are many essentials for the practical utilization of any soil, and little headway can be made until they have all been given due consideration.

The Pennsylvania Plat Results teach this fact above all others: They show that at the end of nearly a forty-year period crop yields have in no case been materially increased. Clover alone once in a four year rotation cannot maintain the soil, and unless the soil is treated, the clover itself soon fails. Lime alone is very little better than nothing; fertilizer alone has seldom maintained, much less increased production; while even farm manure has by itself failed to give permanent increases in crop yields except where applied in amounts greater than could have been secured from the farm produced crops. While emphasizing the great need of lime and the value of clover, manure and phosphorus, the results show that first of all for the most efficient utilization of the soil, lime, clover, fertilizer and manure must be intelligently used—not each alone, but all in proper combination.

The Farm Name

Aside from the fact that an appropriate name gives character and dignity and an idea of permanency to the farm or country home, whether it be a large estate or a small plot of ground, a distinctive, original name individualizes the farmer and his products. The farm name individualizes him far more with his customers than his own name which may be as common as Brown or Smith, or so uncommon that it is not easily remembered. Name the farm, produce special products of good quality, brand them with the farm name and they will advertise their producer far and near. Scores of farmers who have gained fame and fortune in recent years owe no small part of their success to the fact that they have realized the importance of having a specialty and stamping it with a distinctive name or trade mark which appears on their stationery and advertising material in the farm papers. They have capitalized the character of their farms for greater gains in the sale of the products.

Breeders of pure stock have been especially fortunate in attracting buyers by the simple expedient of originating a name or trade mark for their farms and the stock produced thereon. The products are of a superior quality, of course, and are advertised extensively in the leading farm papers. In the beginning several years may have elapsed before the publicity resulted in much profit, but year by year the trade name increased in value until today it is worth thousands of dollars to some of the stock men. In every state there are stock farms whose sales are attended by buyers from every section of the United States and Canada. The secret of the success of these men is that they placed the business of farming on the same basis as that of other industries; that is, they built up and placed before the public a specialized line of products of superior quality and labelled them with a distinctive name as other business firms have been doing for a good many years.

Any name is, perhaps, better than no name, but originality should be the keynote. As a rule, the name should be suited to the farm; it should, preferably, describe in either a specific or general way one or more characteristics of the place. The natural features of farms and the types of farming carried on by the owners will suggest many names. A beautiful view, for instance, may be made the basis for a name. The names of shade trees, shrubs, flowers, fruits, farm crops, wild game, rivers, brooks and lakes will usually suggest appropriate names. Family and historical names appeal to many. In fact, the possibilities for choosing an appropriate name for the farm or country home are infinite. If the name originated is musical as well as appropriate, the greater its value for advertising purposes. Alliteration can be used oftentimes with telling effect; an alliterative name usually looks well when printed on a letter-head or painted on the barn or bulletin board. A name that is new and fresh ("freakish" names are to be avoided, however) is more likely to be remembered than any of the commonplace names which have been adopted by scores of farmers. A farm name, remember, in order to possess any advertising value, must be retained and used for a long period of years; it must be as permanent as the farm itself—as the farm's owner, at any rate. Therefore it will be well for every farm owner who desires to place his farm on a permanent basis and at the same time establish a home that shall stand not only as a mark of respect for himself but for the neighborhood and the country at large, to devote considerable study to the selection or evolving of a name which is original

yet appropriate for the particular farm to which the name is to be applied.

The general assemblies of a number of states have passed acts providing for the registration of farm names. The acts are very similar in all of these states and make provision for the registering of farm names with county recorders, who furnish each land owner a proper certificate. No duplicates are allowed in any one county and a fee of one dollar is commonly charged for each farm name registered.—W. F. Purdue.

What of the Small Farmer?

Editor's Note.—The following editorial taken from the National Grange Monthly raises a question of such great importance that not only farmers, but all people, should give it very careful consideration. If the small farmer of America disappears, the chief bulwark of our great American institutions will be gone. The editorial follows:

With all the multiplicity of agricultural propaganda with which the country is being flooded; with the tremendous machinery being erected to foster and direct the affairs of production, distribution and marketing; with the spread of highly-financed organization, national, state and local, that centers around food production and tends to scatter and undermine the labors of the genuine producer; with the rising costs of seed, fertilizer, machinery and labor; with the increasing clamor for shorter hours, higher wages, more holidays and less perspiration; with the tendency in all lines of industry towards doing things on a big scale, and with the increasing tangle of difficulties that confronts the "small man" in every line of activity and that is driving thousands of them to the wall every year, in this land of "equal opportunity"—in the midst of all this chaotic environment, and getting worse every month, one cannot help wondering what is going to happen to the small farmer of America—he who in the past has been such a vital factor, not simply in writing the history of agriculture, but in making and maintaining the vigor and the stability of every rural community in the land. In other words, can the ordinary small, every-day working farmer, in an average rural environment, with limited equipment and restricted opportunities, survive the present day tendencies in agriculture?

Oats Drilled in Rows 2 Feet Apart, Grew a Good Crop Where Oats is not Generally a Success

In these days of "modern efficiency" this ordinary small farmer finds himself up against all sorts of new obstacles, that he never knew before—Labor conditions are as intolerable as prices for needed farm supplies are prohibitive; when he gets a good man hired for the season, along comes his next-neighbor city farmer, with his "play farm" who offers the laborer more money and shorter hours—and gets the man; one expert comes along urging "farming on a bigger scale" in order to be profitable, while the next one advises "curtail production and keep up the price;" when this farmer is struggling to do the work of three men in the field every day, he is assured that "lack of system" is wrecking the average farmer and that he ought to install a complete outfit of books, a time card system, etc., to be able instantly to answer every question about food production costs; from another source he is assured that the only way he can make any money is to buy in a wholesale way and pay cash, tho he very well remembers that his last year's taxes are not yet paid; a benevolently inclined government opens the way for the easy borrowing of money to buy material, but when he comes to pay it, with interest, he finds it must be done in the same old way, by his own personal efforts; he is advised that only thoroughbred stock will pay and that he ought to have a farm tractor, a windmill and a gasoline engine, yet when he takes his modest little load of produce to market he finds "there is a surplus today" and the stuff goes at less than it cost to raise it. All this is but a leaf out of the book of experience of many a "small farmer" in the United States—not "small" from choice, but because that is the situation which seems to constitute his lot, exactly as there are likewise "small" men in every line of industry—rapidly growing fewer, however, with each year of the reign of "big" business.

Soybeans Two-thirds Grown, on Farm of C. W. Gardner, New Jersey, Rows 2 Feet Apart

What then of the future of the small farmer of America? Is there no outlook for him except the harsh alternative of abandoning soil tilling altogether or dropping into the tenant class? It is not the purpose of this article to answer the question, but simply to raise it for earnest thinking, because it is the most serious inquiry that in this precarious year of 1919 can be made along agricultural lines; yet it is a question that is seldom asked and apparently no attempt is being made to answer it. In short it is positively true that practically all the energies exerted today in the directions of agricultural betterment—those that are sensible as well as those that are senseless—are dealing with agriculture on a bigger scale than that of the average, everyday farmer—the man who is doing most of his own work, whose wife and children are giving him noble assistance and the whole family putting up a fight for existence that ought to class them as heroes. Yet the effort is made, in official circles and about everywhere else, to apply to this small farmer and to his limited activities the same big perspective that has been built up around the more extensive farm activities; and it simply won't work.

This article, then, is just an earnest appeal for the small, every-day farmer, in every state in this Union, who reads daily of the "big facts of agriculture," who helps thru his ever-growing tax bill to pay for the mighty farm propaganda that envelopes the land and which perhaps benefits somebody, even if only the high-salaried "experts" who feed upon it—and then this small, every-day farmer faces his own meager home conditions on a real farm, usually a little one and probably a stony one, and he wonders where he fits in to it all. And unless somebody else, and a lot of somebodys else, begin to think pretty soon and pretty seriously about this same question, the United States is coming bye and bye to a realization that she has lost the man who has been the biggest asset of this nation and the one who at the very bottom of things has supplied, in local community, in state and in nation, the elements most vital to a great growing nation—the average, every-day, hard-working, home-owning, God-fearing small farmer of America.

A Cemetery—and a Sermon

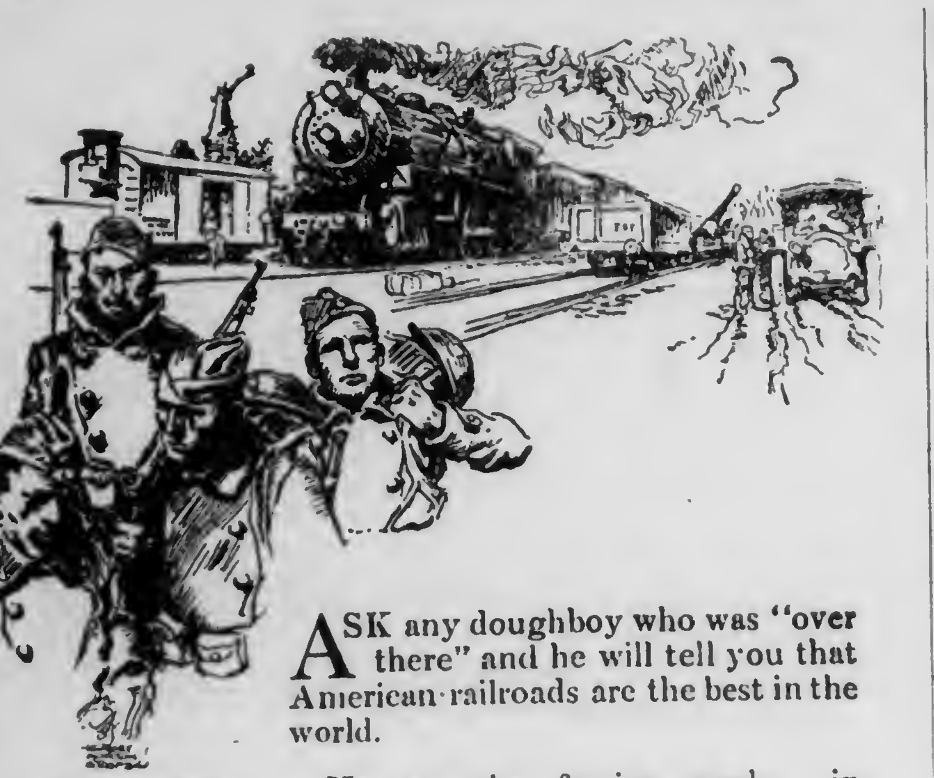
It was a neat little country cemetery, much like most little country cemeteries, yet there was something queer about it. There was the arched gateway and the customary weeping willows by it. The clipped hedge was like most cemetery hedges. The tombstones were about the average run of tombstones. But, withal, there was something queer—even shocking. Then you discovered what it was. These were truthful tombstones. Consoling platitudes—"Too pure for earth," and that like—found no place. Instead, there were such epitaphs as these: "Mother—walked to death in her kitchen;" "Sacred to the memory of Jane—she scrubbed herself into eternity;" "Grandma—washed herself away;" 'Susie—swept out of life with too heavy a broom."

The people who saw that cemetery—and there were thousands of them—may have been shocked for the instant, but they came away with the thought that one might be better for seeing such a cemetery. For, you see, it was a miniature cemetery, three feet square, and it was part of an exhibit at the Montana State Fair. Such levity with the most solemn thing that mankind knows could not be justified merely on the theory that the things said were true—but those who saw it came away with the belief that it was justified by way of keeping just those things from being true. And that was the purpose of the exhibit, placed there by the agricultural extension department of the State Agricultural College of Montana. It was meant to emphasize the need for home conveniences, for lack of which many a farm woman has gone to her grave before her time.

There were other exhibits designed to drive home the same hard truth. One was a model showing a bleak farmhouse on a bare hill. At the bottom of the hill ran a little stream, and by the stream were barns and cattle. Struggling up the hill toward the house with two heavy pails of water was a bent old woman. And the legend was: "Convenient for the cattle—but not mother." Then there was a farmhouse with the water supply as it should be, the woman in the yard sprinkling her flower beds with a hose. And the inscription read: "Convenient for mother—and the cattle, too." Another model showed a kitchen as it should be, and another, a kitchen as it should not be. And there was the legend: "A long-distance kitchen shortens life."

OLDEST FERTILIZER PLOTS

The oldest fertilizer experiments in the United States are at the Pennsylvania State College. They have been run for thirty-eight years, having been started in 1881 by W. H. Jordan, and are second in age only to the famous Rothamstead tests in England. Four tiers of 36 plots each are used in a four-year rotation of corn, oats, wheat, and mixed clover and timothy. Thus on the four tiers are grown each year all four crops for every treatment. Each plot contains an eighth of an acre. Every rotation of four plots has been given the same individual treatment for the last 38 years to obtain facts, not only on the value of certain fertilizers on certain crops, but to find out the permanent effects of a long-continued application of various forms of plant food. The results of no fertilizer is compared with complete fertilizers, incomplete fertilizers and different forms of nitrogen and lime in crop production. Often the effects during the first few years are different from the effects for 15 or 20 years.



The railways of the United States are more than one third, nearly one half, of all the railways of the world. They carry a yearly traffic so much greater than that of any other country that there is really no basis for comparison. Indeed, the traffic of any two nations may be combined and still it does not approach the commerce of America borne upon American railways.
—*United States Senator Cummins.*

ASK any doughboy who was "over there" and he will tell you that American railroads are the best in the world.

He saw the foreign roads — in England and France, the best in Europe — and in other Continental countries — and he knows.

The part railroads have played in the development of the United States is beyond measure.

American railroads have achieved high standards of public service by far-sighted and courageous investment of capital, and by the constant striving of managers and men for rewards for work well done.

We have the best railroads in the world — we must continue to have the best.

But they must grow.

To the $20,000,000,000 now invested in our railroads, there will have to be added in the next few years, to keep pace with the Nation's business, billions more for additional tracks, stations and terminals, cars and engines, electric power houses and trains, automatic signals, safety devices, the elimination of grade crossings — and for reconstruction and engineering economies that will reduce the cost of transportation.

To attract to the railroads in the future the investment funds of many thrifty citizens, the directing genius of the most capable builders and managers, and the skill and loyalty of the best workmen—in competition with other industries bidding for capital, managers and men — the railroad industry must hold out fair rewards to capital, to managers and to the men.

American railroads will continue to set world standards and adequately serve the Nation's needs if they continue to be built and operated on the American principle of rewards for work well done.

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Outlook for American Dairy Farmer

Address of Secretary of Agriculture Rasmussen Before the Tri-State Association Meeting

(Continued From Last Week.)

The Attitude of the People on the Price of Milk

Since milk is an indispensable food for the proper physical and mental development of children, the price of milk is necessarily of great public concern. Every effort should be made to have the greatest possible efficiency in the production and distribution of milk. Neither farmer nor distributor is justified in dealing in this product to take more than a normal profit. On the other hand the profit must be great enough to give to capital interest on the investment, and to the laborers, whether farmers or distributors, a living wage.

To say that milk must not advance in price because it is indispensable to the growth and development of children, is an unsound and lamentable attitude. The price of milk must advance with the increased cost of labor, freight rates, wages, material and coal. To arouse public opposition against an increase in the price of milk when such price is necessary to maintain the production is a public calamity. Individuals, who for political reasons or from enmity play on the sentiment of the consuming public in this regard, deserve the condemnation of the public.

The reports in the New York papers of the conference on the price of milk, held last week, contain the statement that milk could be sold at a profit from stores in New York at 10 cents per quart. Such a statement is incorrect and absurd, yet why should not the public, unfamiliar with the dairy industry, believe it. Unquestionably they do, and thus the mind of the consumer is poisoned against the entire milk industry to the detriment of all concerned. There never was a time when it was more important to deal with facts only in discussing the question of present prices. Untold harm can be done by continually arousing public sentiment on this subject. I am not only against all profiteers, but equally against those who, by false statements either from ignorance or purpose, add to the present public unrest and make the readjustment of business and industry more difficult.

An organization of women in New York purposes to eliminate milk from their purchases three days a week. If such a threat were carried out by all the women of New York City even for a week, as a result millions of pounds of milk would be wasted and both farmers and distributors would sustain great financial losses. If the dairy business is to be self-sustaining, such losses and waste will eventually be paid by the consuming public. It is an extremely bad policy today to deal with the necessities of life in such an arbitrary manner.

There is quite a contrast between the way in which the milk question has been handled in New York and Philadelphia. In Philadelphia the farmer, thru the Inter-State Milk Producers' Association, the consumers, thru their organization, and the milk distributors have studied each other's problems. When the price of milk has been advanced, evidence has been produced both by farmers and distributors which clearly justified the increase. There have been no strikes by the farmers nor boycott by the consumers. There has been no calling of names in public. The organizations have been free from radicals. The deliberations have been temperate, each side only searching for the economic facts. The newspapers of Philadelphia have not tried to make capital out of the milk question but have treated it in a fair, impartial way, and by so doing have rendered a great public service. The result is that there is a normal, healthy state of mind on the question of the price of milk both by the farmers, the distributors and the consumers.

What it means to the state and to the welfare of the people to have an unbiased, economic view on the milk question can only be fully understood and appreciated when we know that out of 219,000 farms in Pennsylvania approximately 190,000 have dairy cattle and that milk is an indispensable food for the proper physical and mental development of all the people of the state.

In passing it may not be out of place to mention that the price of milk to the consumer in Philadelphia is less than the price in any other city of its size in the country.

Dairy Farmer's Problem

From the general survey of the dairy situation it is apparent that the reduction of dairy cattle in Europe is not great enough to stimulate extensive imports of cattle from this country, neither can it be expected that this country will continue to export dairy products to Europe in as great amounts as during the war, especially if the imports of grain products into Europe is resumed at approximately the same rate as before the war. Europe in a few years will likely be able to produce all the dairy products the people can purchase.

Whatever the condition is of the dairy industry in other parts of the world there are certain fundamental problems which need the immediate attention of all dairy farmers and manufacturers. Foremost among which are: First, increased production per cow; second, decreased cost of production; third, effective selling organization; fourth, increased consumption of milk and dairy products; fifth, a close study of the world markets for dairy products and the purchasing power of the people.

Increased production per cow must come thru organized efforts of the farmers. It is impossible to get a rapid increase per cow in a community where small herds prevail, except thru co-operative bull associations and thru cow test associations. A rapid improvement in the dairy cattle is fundamental to keep the dairy industry on a profitable basis. It is not more cows that are needed in this country at present, but more milk per cow.

Increased production per cow means less cost per quart of milk produced. To further decrease the cost of production, the dairy farmer must make a close study of the fundamental principles underlying the production of milk. The feed cost of the production of milk in many instances can be reduced by a more careful selection of feed and by improved methods in purchasing, also

by a careful study of crops grown on the farms.

Recent history of market milk industry proves it is necessary for the farmers to have a selling organization. If such an organization is established and operated for the sole purpose of increasing the price of milk it will sooner or later prove a failure. If in addition, the organized effort is used to improve the milk supply, to educate the producers to reduce the cost of producing milk and to educate the consumers to the food value of milk, the organization will render a permanent benefit to the farmer and to the consumer.

The consumption of milk in this country is estimated at 1 pint per capita per day. It is not the price of milk which is the main cause of this low consumption per capita, it is because the average person is ignorant of the health and strength giving qualities of milk. Thousands of dollars are spent daily in this country for soft drinks, candies and movies and other less essential or unnecessaries by people who need the vitamins and proteins of the milk for the sake of their own health.

A campaign of advertising the food value of milk on a large scale is essential, not only to relieve the industry from a surplus in case of a too sudden reduction in the exports, but also for the sake of bringing forcibly to the attention of the public milk as an indispensable food.

In the opening sentence of this address, the statement was made that there would be a greater inter-dependence of all countries of the world. The standard of living thruout the world will tend to be more uniform. It is highly important that the people of Europe regain their purchasing power, for it does not seem possible to have prosperity in industry and agriculture and extravagance in living in the United States and to have depression and starvation thruout Europe. Last year the United States exported approximately two billion dollars worth of agricultural products. If agriculture and industry are to continue to prosper in the United States, we must continue to trade with the rest of the world. We must trade with people and countries not dying from starvation, but with people active in their own industries and with purchasing power gained not from loans from other countries but earned thru their own production.

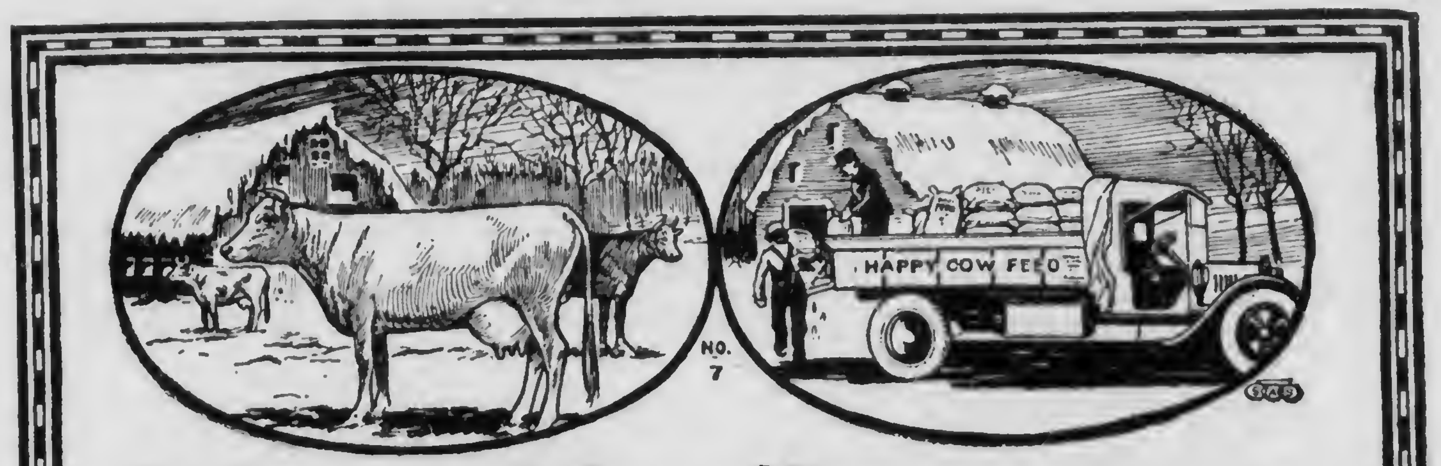
CALVES WITHOUT MILK

I saw in November 29th, copy of your paper an inquiry about raising calves without milk. We have tried several methods, but find it impossible to raise a good calf without some milk to start with.

We feed whole milk for the first two weeks, three quarts per calf, twice a day. The third week we give it two quarts with one heaping tablespoonful of calf food dissolved in one quart of boiling water. After the calf is three weeks old we use two tables-poons of calf food in two quarts of water and one quart of milk until the calf is two month's old, when we drop the milk and continue the calf food until the calf is three or four month's old.

As soon as the calf is old enough to eat we feed clover hay and grain composed of ground oats, oil meal, corn meal, and bran.

I am not advertising any special brand of calf food, but have raised some splendid calves in that way at a small cost, and have had little or no trouble with scours.—J. H. B., Sauquoit, N. Y.



WINTER MILK PRODUCTION

Never before have dairymen been as particular about the money-value of the feed they buy. This is the reason why the most successful dairymen are buying and feeding

Happy Cow Feed

(24 per cent protein)

This famous dairy ration is the best all-year feed for your cows. It is making new high records in winter milk production, and it is making the herd-owners happy.

You will get more value out of HAPPY COW FEED—pound for pound—than any other feed you can buy. It took us years to perfect it. There is no guesswork about it.

HAPPY COW FEED is made of cotton seed meal, corn meal, cocoanut meal, velvet bean feed, unhulled peanut oil feed and alfalfa meal. It is a complete ration properly balanced.

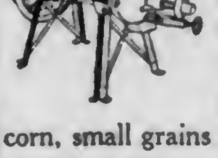
You can't beat these ingredients for dairy feed. Some of them are grown only in the South. They have been the back-bone of Southern dairying for many years.

Memphis is one of the largest feed manufacturing centers in the world, and Happy feed is the largest line of feeds made in Memphis. All these feeds are pure and of the best quality.

Put your cows on HAPPY COW FEED and you'll greatly increase your winter milk production. There is a good dealer near you. If you do not know him, write us for his name.

HAPPY COW FEED

Address Dep't. 149
Edgar-Morgan Co., Memphis, Tenn.



Peerless Feed Mill

Double crusher roll, machine-cut plates. Grinds better quality feed with less power, grinds green ear corn, small grains and alfalfa. Also furnished with cast plates. Sizes 1½ to 20 H. P. Write for prices and catalog.

Peerless Fodder Shredder

If you have 3 H. P. engine you can run this 14-inch machine successfully. Will pay for itself in one year's use. Will not pulverize blades and tops. Sold on thirty days freetrial. Write for price and catalog.

A. M. DELLINGER, Lancaster, Pa.

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Government and Municipal Bonds
Over a Quarter Century in this Business
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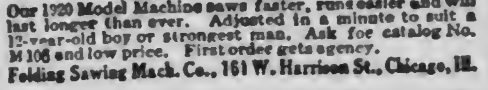
1 Man With a Folding Sawing Machine Beats 2 MEN With a Cross-cut Saw
5 to 9 cords daily is the usual average for one man



Our 1920 Model Machine saws faster, runs easier and will last longer than ever. Adjusted in a minute to suit a 12-year-old boy or strongest man. Ask for catalog No. M 106 and low price. First order gets agency.
Folding Sawing Mach. Co., 161 W. Harrison St., Chicago, Ill.

$10,000.00 BACKS THIS SAW

As low as $10 For Hertzler & Zook Portable Wood Saw Frame

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Is easy to operate. Our No. 1 is the best and cheapest saw made to which a ripping table may be attached. Guaranteed 1 year. Money refunded if not satisfactory. Write for catalog.

HERTZLER & ZOOK CO. Box 29 Belleville, Pa.

Clipped Cows Mean Clean Milk

Wide awake dairy farmers assert that it's next to impossible to obtain milk with low bacteria counts without clipping. They clip their cows on udders and flanks at frequent intervals during the winter and early spring, which makes cleaning quick and easy and keeps dirt and other filth out of the milk. Here's what two of them say:

JELKE DAIRY FARM
Dundee, Ill., Nov. 7, 1919.
A clipping machine is about the most important thing used in a dairy barn to get clean milk, as well as to keep the cows clean with much less work. **When a cow is not clipped, all the manure sticks to her hips, legs, udder and sides, and it is impossible to get sanitary milk.** No matter how careful a man may be, it is bound to get into the milk. Clipping a cow does not take much longer than to clean her well—after clipping the cleaning is a very small job.
J. P. TUCK, Manager.

BROOK HILL FARM
Genesee Depot, Wis., Nov. 6, 1919.
We find clipping our cows a necessity both from the standpoint of saving labor and of cleanliness. In maintaining a high standard of milk production clean cows are necessary and **only clipped cows can be kept clean.**
HOWARD T. GREENE, Sec'y.

The Stewart No. 1 Clipping Machine, here illustrated, is best. Runs easily—lasts a lifetime. Clips horses and mules also. Your dealer has it, or order from us at $12.75. Send $2 if you wish and pay balance on arrival.
Electric Clipping Machine, direct current, $60; alternating current, $80.

Chicago Flexible Shaft Company
Dept. B149 Roosevelt Road and Central Ave., Chicago

PENNSYLVANIA FARMER
AGRICULTURE THE KEYSTONE OF NATIONAL PROSPERITY
ESTABLISHED 1880 PUBLISHED WEEKLY

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PHILADELPHIA, PA., DECEMBER 27, 1919.
VOLUME 46 NUMBER 26

Our job is to serve our readers. Whenever and wherever we can help you, write us.—The Editors.

The Close of the Year

THE NEW YEAR is universally accredited as being the proper time to pause a moment and find out "where we are at." Individuals review their actions of the past months with more or less honesty and make an effort to look themselves squarely in the face, even tho they may "straightway forget what manner of men they are." Business men, with pencil and paper, take stock and make an inventory of their possessions to find whether the work of the year has been protfiable, and to learn something as to the needs for the future. The New Year's season may be likened to a high point in the road of life from which we look back and see the path over which we have come; then we set our faces towards the future and try to see what lies ahead, buoyed up and strengthened by the renewed hope for better things that springs eternal in the human breast. But those of steady purpose and high motives will see the road that stretches out before them is up grade, just as it has always been in the past. It is only the weak and the careless who find the journey of life to be down hill.

Barring the regrettable loss of personal friends and fellow-workers, Pennsylvania Farmer reviews its work of the past year with an excusable feeling of satisfaction, if not pride. We feel that we are warranted in this because of the loyal support and cooperation which our readers have so generously given us. The kind words of encouragement, suggestion and criticism have enabled us to make the steady improvement which we continually endeavor to make. The rapidly increasing number of readers is evidence that our work is appreciated, and the honest and successful efforts of our many contributors to give the best that is in them helps to increase our zeal to make a paper that helps the farmer and his family to better things and, thru them, to aid the cause of humanity.

But we shall not rest on our oars. The coming year will need the best that every man, woman and child can give in every field, and it is our purpose to increase our efforts to make Pennsylvania Farmer still more useful,—even indispensible. May it be your purpose to assist. To this end and for past favors

WE WISH YOU A PROSPEROUS AND HAPPY NEW YEAR.

The School Problem

IT IS to be regretted that the Legislative Committee of the Pennsylvania State Grange felt it its duty to disapprove of the centralized school idea. For a generation there has been increasing complaint that the rural schools were not meeting the needs of the rural children, and this complaint is well founded. When the cause of their deficiency is sifted down it is found to be largely because of: 1.—insufficient equipment; 2.—unprepared and inexperienced teachers; 3.—too many grade for 1 teacher; 4.—text books and curriculum not adapted to the environment and needs of the child; 5.—either over-crowded conditions or too few pupils to incite healthy rivalry and interest.

Where consolidation of schools has been intelligently carried out the public opinion is almost undivided in its favor. The opposition which existed at first has almost invariably died out because the results have justified the move. The fundamental principle of cooperation which the grange has preached for years applies in the matter of conducting educational work. In spite of the prejudice which some farmers still have against education, time emphasizes more and more the necessity of proper intellectual training if the young men and women are to be able to meet the competition of the twentieth century. The average rural school of today furnishes little beyond a meaningless eighth grade, hence the country boy and girl is unable to enter any higher institution of learning without first spending three to four years at a preparatory school. With proper grading of school in the home districts all this could be changed, besides making it possible to have such a school as would provide a more or less finished education within the shadow of home.

To have such schools it is necessary to have something along the line of the centralized plan. Perfection may not yet be reached in their development, but the leaders of agricultural matters have not discharged their duty when they have simply made a protest against a proposition without suggesting a better one.

The Grange Meetings

THOSE who have followed the actions of the National and State Grange meetings will be impressed with the unanimity with which they discussed and acted upon the important questions of the day. The Grange is the most representative, organized body of farmers in this country and it cannot truthfully be said that there is no way of finding out the sentiment of farmers upon the important questions of the day. The discount that many people put upon its actions because, as they charge, it is a secret body is not justified, because the principles and purposes of the grange are not selfish nor restricted to class interests. The grange has done and is doing a noble work in its field. The question which many are asking is, can it handle all the interests of farmers in the most efficient manner? There should be no jealousy or other legitimate and worth while movements, but encouragement should be given by this best equipped class of farmers to other agencies intended for specific work. There is need as well as room for every organization of farmers that has a well defined purpose, but it must be managed and directed by farmers. They who really want the farmer's view-point can secure it by watching the reports of their meetings. Their resolutions are suggestive.

Ready for the Enumerator?

ARE you ready for the visit of the census enumerator who will begin his work among farmers next week? Farmers should be especially interested in the taking of the coming census and willing to cooperate to the fullest in securing an enumeration which will be even more valuable than any previous census. It is the best if not the only available way of arriving at an intelligent understanding of the economics of our national agriculture. The results will be impersonal, but the total for county, state and nation will be most valuable. It is the intention to make this census more exhaustive than any previous one by securing information on lines that have never before been asked for. Farmers need have no fear in giving the fullest possible information to the enumerator on any subject. as everything will be held in the strictest confidence and the individuality of the particular farmer is absolutely lost in the totals. Heretofore, it has been difficult to secure the fullest information because of the unwarranted suspicion on the part of some farmers that his "secrets" might become known to his neighbors, or that it might be used as a mans of raising his taxes. Nothing of this kind should be feared.

What About the Railroads?

THE close of the year finds the railroad situation still "up in the air." A number of bills have been presented to Congress and each finds a host of proponents as well as a host of opponents. Aside from those who may have a selfish interest one way or the other, the general public expresses little opinion and has still less understanding as to what should be done with them. The railroad system of this country is a tremendous institution—there being invested in them about 20 billions of dollars, belonging to tens of thousands of our citizens, and employing hundreds of thousands of people. The progress and prosperity of the nation is absolutely dependent upon an efficient railroad system, and every citizen should be interested in such government action as will provide for a stable condition and a progressive development of the transportation systems. What shall the public policy be? Surely not such as will destroy the system and discourage improvement.

The development of the country necessitates a continual expansion and extension of transportation facilities. This requires the continual investment of new capital, since no business can expand greatly upon legitimate profits alone. The condition of the railroads and the needs of the country are just now calling for the investment of millions of dollars for repair, improvement and extension, but the millions are not forthcoming. Money is being invested in everything else than railroad stock. Why? Because other things pay better. Railroad stocks that have for years been selling at or above par have been gradually going down until in many instances they are lower than they ever were. What is the cause of this? The uncertainty due to the present predicament and the lack of a sane, constructive policy on the part of Congress and the public.

No class of people is more interested in the railroad system of the country than the farmers, and there is no class among whom there is a more general hostility against railroads. This feeling was engendered by the unfair practices of railroads themselves in times gone bye. It is but the natural fruit of the attitude of railway managers towards the public in its relations with them. This is also the cause of the innumerable and conflicting state laws which made a national, unified system impossible, and was the greatest cause for necessity of government operation during the war.

But all this is history. We are starting anew. The problem before us now is the establishment of laws and conditions which will prevent the repetition of old-time abuses and formulate a plan which will give us the most efficient and economical system of transportation possible and at the same time provide for its maintenance and extension. There must be a reasonable assurance of profit if the needed capital is to be invested. To get this, the "regulation" of returns must not be too severe so long as no limit is set upon the profits made by other lines of business, or else capital will continue to shun railroads and we shall soon have a chaotic condition resulting from insufficient transportation. Agriculture would be hit first and hardest by such a calamity because prosperity is dependent upon transportation to and from the farm.

Congress needs prodding on this question and needs the intelligent advice of interested citizens. It has before it a number of bills but they may be reduced to four general plans: (a) Straight-out government ownership and operation; (b) Government ownership and private operation; (c) Private ownership and government operation, and (d) private ownership and operation under government regulation by a non-political board. Since farmers are vitally interested they should make an unbiased study of the question and make their wishes known. At present, there is uncertainty as to farmers' views, since one "national body declares that farmers favor government ownership while another, the National Grange, says farmers are opposed to that principle. Personally, we favor the fourth (d) of the plans given above. First, because we think it will give better service; Second, because it will encourage rather than stifle initiative; third, because it will be more economical in operation and make necessary development sure, and fourth, because under this plan railroads cannot be made a subject of partisan. political bickering. We believe that the majority of the people are sick and tired of the experiment in governmental operation.

NEW YORK LETTER

State Fund For Sheep Damage.—The Onondaga County Sheep Breeders' Association at its annual meeting this week indorsed several important measures designed to protect the sheep industry. They included an endorsement of an act to be introduced in the new legislature to increase the minimum dog tax from $2 to $5; an approval of the measure to be introduced in Congress to require the labelling of all woolen fabrics with the amount of pure material contained therein; and an endorsement of a movement to create a state dog tax fund out of which shall be paid all losses to sheep raisers caused by dogs. Now each county has its own fund and in some where there are many dogs the losses amount to such a figure that the county fund is depleted early in the year, while in other counties the fund is undistributed. Making the damages payable from a state fund would insure the payment of all losses if the dog tax is high enough. Onondaga County this year registered 9,394 dogs, whose license fees amounted to $18,608. Out of this $3,798.50 was paid for damages done by dogs.

Beef Cattle Raising.—This state raises few beef cattle. Yet it is pointed out that the industry is well adapted to hill farms or those remote from shipping points. A Pulaski man has bought a valuable big farm with fine buildings in Tully and will at once go into beef cattle raising on a large scale for the home markets, as he considers conditions good for the business.

Bee King Retires.—J. Rich Reed—long known as the "bee king" is going out of the bee business and will spend the winter in Florida. He has spent his life directing and developing aparies in this state, the South, Ohio, and Michigan, Canada, Cuba and the Bermudas.

Transfer of Breeding Stock.—The sale of a dozen cows and young stock covering nearly all the noted strains of Holsteins, by Garrett S. Miller of Peterboro to Decker Brothers of Phoenix has attracted lots of attention in dairy circles. Mr. Miller was one of the first importers of these cattle, and one of the organizers of the Holstein-Friesian Association. His herd is said to conform most closely to type of any in Amreica, and he makes few sales, this being one of the largest in years. Most of the leading strains today came from his herd originally. He has kept only herd records—as he would never subject his stock to the strains of tests.

State Meeting of Farm Bureaus.—The New York State Federation of Farm Bureaus were in two day session in Syracuse this week. Their action on the recommendation of George Gordon Battle that the Governor appoint a state milk commission has been awaited with interest. also on the recommendation that the Council of Farms and Markets be abolished, and that Dr. E. H. Porter as commissioner of that department be removed. It is expected that the farm representatives will line up strongly against Dr. Porter's removal who has served agriculture well, altho many of the features of the Council have been of no benefit to any but politicians.

New Butter Record.—All records for butter production are believed to be broken by Lulu Alphica, a two-year-old Jersey of Asburn. She produced 13,669 pounds of milk in a year from which 1,000 lbs. of butter was made, or 100 lbs. in excess of her weight. The milk tested 5.85 percent butter fat, or nearly 50 percent richer than ordinary milk.

Fur Values.—More skunks have been taken in Central New York than in any previous three seasons at this time. Best black pelts bring $6.50 and striped ones $2 to $4. Raccoons are $10, but are very scarce, as are muskrats in this section due to close trapping last year. Minks are scarce and very high, $15 for good sized pelts.

Market and Other Notes.—The weather has been way below zero for a few days all over the state, checking shipments of cabbage and potatoes. The latter are quoted at $1.50 and $2 a bushel. Cabbage sales last noted were $60 per ton at the cars and up-state points, tho New York City quotations ran to $80 and $90 ton. No. 2 hay is bringing $22 to $24 tho it is quoted at $30 and over. Eggs brought $1.20 on the Syracuse market recently, tho $1 is the prevailing retail price. Cream is quoted at 80 cents, an unusual figure. Dressed pork is $16 to $18 a cwt.

Muck Crop Farming.—Fulton truckers and farmers will hold a three-day school on January 20, 21 and 22, when two state college experts will give instruction on the raising of crops on muck soil—as the principal subject treated. Co-operative marketing is the topic being discussed in a series of meetings this week in Cortland County, when George Porter will address the farmers. There is a great demand from farmers for more help in selling their crops to better advantage and in a way not to increase retail prices, but rather to reduce them while giving the growers a fairer price and eliminating unnecessary middlemen's profits.

Faulty Investigation Conclusions.—Commissioner George Gordon Battle, special investigator of living costs for the Governor, announces very mistaken conclusions as the result of his inquiries. One of them is that the interests of food consumers and food producers are antagonistic, another is that the Dairymen's League is a middleman between the producer and consumer. He charges that expensive operations of the League last year added $200,000 to the retail price of milk. The League replies that it is making collective sales of milk for farmers which if made individually would have cost $2,750,000 more than they did. John C. Agar, chairman of the Reconstruction Committee says that public utility regulation of the distribution of milk is the only way to cut unnecessary expense. The finding of Commissioner Battle being based on false conclusions, meet with no approval up-state.

NEW JERSEY NEWS

Urges More Peach Trees.—The planting of more peach trees by the fruit growers of Mercer County has been urged by E. V. Bearen, agricultural instructor at several of the high schools in Central New Jersey, and he has pointed out that this section is becoming more and more prominently identified with the raising of this kind of fruit and that admirable markets for the sale of the peaches are to be found in Philadelphia and New York. This fruit flourished in Mercer County even before it reached Delaware or Maryland after having been brought from China, but in 1900 it was given such a setback by the San Jose scale that its progress was very much retarded. In that year, New Jersey produced more peaches than any other State in the country except California and Texas. At that time, Hunterdon County ranked first in the growing of the fruit but just now Burlington apparently heads the list. It is said that practically all of the well-drained soils in Mercer County are well adapted to peaches, and especially so are those sites elevated sufficiently for the peaches to avoid Winter injury.

Public Market To Be Established.—The Board of Commissioners of Jersey City has voted to appropriate $75,000 for the establishment of a permanent public market at Maxwell Street and Jersey Avenue in that city. It has been estimated by the commissioners that the revenue from the venture will be $15,000 per year, and $3,000 from the farmers who will locate at the market. Commissioner Gannon, of the Jersey City Department of Revenue and Finance, has been authorized by the board to proceed quickly in having the market opened. Willard Stanton, business manager of the Chamber of Commerce in Jersey City, has declared that he had been assured by a large number of farmers, that they would supply the market all year round with all kinds of fruits and vegetables.

Use of Cranberries.— Altho it requires a great deal of sugar to sweeten cranberries, and with a great scarcity of that commodity in this state, dealers have reported that there is a keen demand for the berries. it being claimed by to house-wives that the holiday season would be lacking very much without this side dish with the turkey or other fowl. The food situation is brightening somewhat over Summer and Fall conditions as Winter products arrive in various sections of New Jersey.

Alfalfa Association to Meet.—Arrangements have been completed for the annual meeting of the New Jersey State Alfalfa Growers' Association in Trenton on Friday, January 16, while "Agricultural Week" is being observed. In the announcement made of the proposed gatherings, it was stated that farmers of the state, particularly dairymen, are coming more and more to realize the value of this important hay crop, that the association has done much to develop the crop in the state, and that it has found that irrigated northern-grown seed now gives best results and has secured a good seed from known sources for its members. The work of the organization will be fully discussed at the meeting by President George T. Reid, of Mount Holly, and Secretary Frank App, of the State College of Agriculture at New Brunswick. "Methods of Seeding Alfalfa and Crops Following Alfalfa in Rotation" will be the subject of an address by Prof. Nicholas Schmitz, of the Pennsylvania State Agricultural College. The curing of alfalfa will be covered by H. W. Jeffers, president of the Walker-Gordon farms at Plainsboro, and Walter L. Minch, president of Minch Brothers' Farms at Bridgeton. Both of these men are well known to the farmers in this state, and both have had practical and lengthly experience with alfalfa.

Rooming Accommodations For Delegates.—The State Department of Agriculture has appealed to the Trenton Chamber of Commerce for aid in obtaining rooming accommodations for delegates to the annual "Agricultural Week" to be conducted at the State House and other points in this city next month, and the publicity and convention bureau of the chamber has promised that it will assist in securing accommodations.—Kelly.

THE GRANGE ON RAILROADS

The National Grange has made public a letter addressed to Chairman Cummins of the Senate Interstate Commerce Committee urging no further delay in passing legislation for the turning back of the railroads to their owners. This letter is made public in view of the effort which has been made during the past week to delay action on this legislation. The Grange is opposed to further delay except such as may be absolutely necessary to pass legislation establishing a definite railroad policy.

In this letter Prof. T. C. Atkeson, Washington Representative of the National Grange quoted the resolution adopted at the recent annual session at Grand Rapids, Mich:—

"The Grange approves the general principles of Railroad Legislation now pending in Congress to return the railroads to their owners."

This sets at rest any question about the position of the farmers of the country in-so-far as their voice is expressed by the National Grange.

The opposition of The Grange to any guarantee of dividends is strongly expressed in this letter. This opposition is based on Grange precedent and principle not on the question of how much or how little it will cost, but on the "broad, human proposition that the moment a specified return on investment is guaranteed on investment in any way, at that moment the incentive to full efficency and economy of operation ceases to function; and that our Democracy is founded on the principle of private enterprise, private initiative, and individual efficiency. Because of this, "the statement concludes, "we suggest that no provisions be left in this railroad legislation which seek to socialize or nationalize railroads even to the extent of an implied guarantee of earnings."

Prof. Atkeson also suggests the elimination of the provisions for a new Railroad Transportation Board, on the ground that the Inter-State Commerce Commission can and should perform all the necessary administrative work to give force and effect to the railroad policy laid down in the Cummins bill. This is in effect an endorsement of the Esch Bill in this particular respect.

THE EDUCATIONAL MEETINGS AT HARRISBURG, PA.

January 20, 21, and 22, 1920.

In connection with the Farm Products Show will include those of

Pennsylvania Department of Agriculture.

Agricultural Press.

Pennsylvania Breeders' and Dairymen's Association.

Dairymen's Co-operative Sales Company.

Pennsylvania Department of Public Instruction.

Pennsylvania Holstein - Friesian Association.

Inter-State Milk Producers' Association.

More Sheep—More Wool Association.

Pennsylvania Potato Growers' Association.

Pennsylvania Sheep Breeders' and Wool Growers' Association.

Pennsylvania State Bee Keepers' Association.

Pennsylvania State Poultry Association.

Pennsylvania State Veterinary Medical Association.

State Horticultural Association of Pennsylvania.

Tobacco Growers' Association.

Dig out the barberry, says the Pennsylvania Department of Agriculture, Bureau of Plant Industry. All the evidence that is available indicates that this plant is a very important factor in increasing wheat rust. The Japanese barberry is harmless but the common variety harbors the rust.

IN NEXT WEEK'S ISSUE—WATCH FOR IT

"The Banner American County"

An illustrated article giving facts, which, according to the author, prove Monmouth County, N. J. to be the banner county of the United States.—By C. C. Hulsart.

Report of Dairymen's League Meeting

A full report of a large meeting of the League recently held in Jersey City.—By a correspondent.

Other articles of interest will be

What Do Eggs Cost?

Experience With Pears

Varieties of Apples and Pears

Besides these the usual high-class department features and articles of general interest and information, including State Letters, comments, current opinion and editorial discussion.

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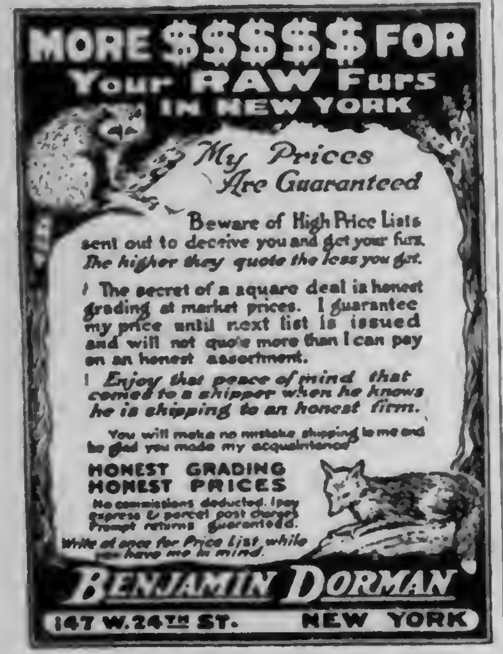

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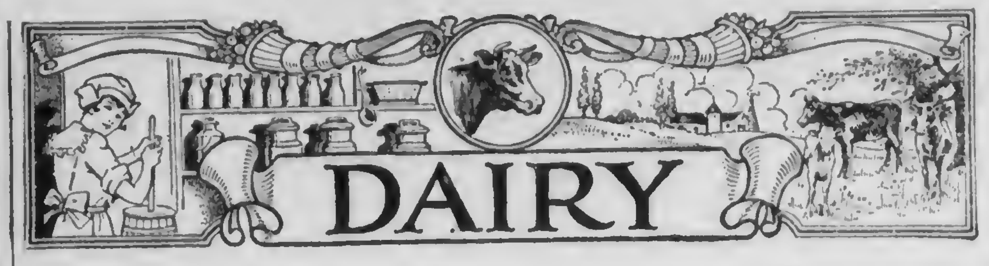

DAIRYMEN'S LEAGUE MEETS

As the early December days wear on the interest in current dairy affairs somewhat increases. The city milk boycott gets on the nerves of dairymen. What causes it, and is the cause removable? Unquestionably it is igorance that is the chief cause, but what interests or motives work upon this ignorance to cause such foolish antics? These are questions that concern the dairy farmer. As we see it up here in the country, it is a set of selfish interests that stir up the populace in the city in order to profit by the uproar. I will not say what these selfish interests are definitely, but they would seem to be directly or indirectly financial. I would not say that dealers are not sometimes concerned in certain phases of it altho they come in for a good share of criticism even in the city. Politicians are with little or no doubt making something of a hit in it and may be primarily responsible, and the city press is most responsible either from misunderstanding on from desire for prestige.

As to whether it is removable is by no means an easy question to handle. It takes a big lot of work to educate five million people. A crucial test however, with the right parties in the saddle sometimes makes the change rapidly. When the test was on for three days, a meeting was held in the city which was addressed by several prominent gentlemen including the governor and it seems to me at this distance that some progress may have been made. Up here in the country we hear no more about immediate boycotts. The remedies proposed at the meeting are not such as to fully encourage the dairymen that he will not suffer later on. For the city to undertake to handle the milk or even to control its distribution seems to us, in view of what we understand to be the political situation there, to be open to question. I believe that we want to see milk put into stores all about the city and sold at as close a margin as is possible. That milk is so sold in many stores is understood to be true, but we fear that there should be others, and these ought to be encouraged. We are not sure that the milk is always got to these stores as cheaply as it might be. These are items needing further clearing up.

It is no longer sufficient for farmers to concern themselves with milking cows and feeding them or with growing the feeds. They are interested in getting the milk to the consumer as cheaply as possible and in making the consumer a satisfied customer. The marketing of our products is no longer a matter to be left to a few dealers with no attention from the producers. Our big job is to get our products marketed economically. There is little danger but that dairymen will work efficiently and produce economically as they always have done. The weak place is our marketing machinery. It is no doubt true that we have too many low-producing cows and possibly there are some men who feed rather sparingly or without sufficient thought or knowledge, but these are not so many as is sometimes made to appear. To make every cow a big success every year might be ideal but there are practical difficulties. I am not arguing for a lower standard of cows or feeding but like almost all other dairymen for better cows and a better choice of feeds. This line is being worked pretty well. Marketing problems are only begun.

In all investigations, and their number is legion, whether by farm bureaus, state officials or city agitators, the inquirers come down to the poor cow as the cause of most of the difficulties of high prices for milk. I hold no brief for the poor cow, but the poor man who keeps cows has my sympathy. To eliminate the so-called poor cow involves several problems. We must establish a standard to enable us to discern the poor cow first of all, and then we will need to decide whether a man who is struggling with debts shall keep a certain cow or an empty stanchion. To dispose of all cows producing under five thousand pounds of milk means a lot less milk produced. That might be a good thing for the mass of dairymen, but this individual who now owns that cow has a big bit of interest in that problem himself and if he finds that some certain cow is worth too much to him to allow him to dispose of her. I do not feel that he should be too severely dealt with, nor used to prejudice the city consumer.

I saw some figures the other day on prices that the farmer has received for six months prior to October first and the price of feeds at the present time. As I remember these the advance in the price of milk for last summer over 1914, prior to the war, was 266.8 percent. The present advance in feeds as compared with the same date was about 225 percent. This made the profits on milk considerably more than five years ago. It is true that dairymen did the best they have ever done during the months mentioned. Had the present price of milk been compared with Dectmbr, 1914. I am sure that the result would have been far less favorable. Still even now we are considerably better off than five years ago. We feel however that we are tending towards a somewhat lower price level on milk, but we look for more advantageous figures on feeds by another year. This will almost certainly be true if we get to handling feeds more direct. The grain situation in the west does not promise the high price of this year.

While it may be shown that dealers are not in all cases making too much money, and I am rather inclined to think it may be done just now in milk in New York City distribution, it still follows that there is in too many cases too many handlers between producer and consumer. I have just been told on a car load of eggs that was handled by so many people that the final selling price was over 260 percent of the price paid the farmer for them, yet when all the details were figured out, no one handler made any very considerable profit. Nearly all the hands that the car of eggs went thru were simply speculators who did not see the eggs and never did a stroke of work in respect to them. They just bought and sold again at a small margin to the next man. There are not so many hands for milk to pass thru, but there appears to be waste in handling milk. The public is getting pretty anxious to see something done about it.

A still more interesting illustration came to my attention today. A large quantity of sugar has just been discovered in New York city. It has been traced thru fourteen hands each of which made a profit on it but then on going back to the first purchaser of it the information developed that this particular lot of sugar hasn't yet been made. Indeed it now seems possible that the cane itself may not have been cut. These men have simply sold futures, made thin profits, and after a time the sugar will come along. Instead of going on the market at the price paid by the first purchaser it will reach there at the price of the last man in the line. It is in these speculations that is to be found the cause of a great deal of complaint.

It seems to me that consumers are coming to be "wise" on many of these things to a much greater extent than has been known before. Moreover it looks as tho they are getting ready to do something about it during the next three years. I know the tendency of human nature to start after such wrongs with a "band-wagon," and take along no artillery or weapons of war and soon the band ceases to play. In this case I hope for more sustained action, but one never knows. What would you say if the Hearst papers that have so ridiculously slandered the dairymen and their organizations should suddenly take a turn and entirely reverse themselves on the milk questions? Of course, we would all say then that such is the nature of the beast. Just think for a moment, really, wouldn't it be quite as good politics as the course recently persued? I have heard a whisper that it may come.

Farmers are planning to give more attention to bettering the herds, thru cow testing associations, the use of the Babcock test, and by individual weighing of cow's milk. What was said to be the best herd of grade cows in Franklin County has just been sold at auction for $17,000. There were 108 head, mostly Korndyke Ragapple VIII stock. The latter sire recently sold for $50,000. The calves from this herd brought big prices, showing the value placed on breeding.

At a recent milk hearing William Levy, a member of the New York City milk conference board, testified that the price of feed should not be considered in estimating the cost of producing milk; that for five months of the year the cows required no grain; that only 30 minutes in the morning and the same at night were required to care for the average herd.

Coincidently with that an official of the Dairymen's League says that 90 percent of the cost of milk production is feed and labor.

The former witness may possibly be honest in his belief but it is only typical of the profound ignorance of the public as to dairy matters, or their greatly warped judgment—warped by long years, and millions of dollars worth of continuous advertising on the part of the body this witness represents, which produce just such distorted views of farm life.

There would not be a constant stream of people leaving the farms for the cities as there is now if the earnings on the farm for owner or laborer were comparable to those of the city. Farms cannot be sold here today for the price of the buildings

DAIRY RATIONS UNDER PRESENT CONDITIONS

The editor has asked for the best I have on buying feeds. This is a hard question to deal with at arm's length and in general terms so that persons in different localities may be benefitted.

There are two things to be taken into consideration when feeds are being bought: (1) The relative value and the choice to be made to get the most for a dollar; (2) The feeds themselves, their palatability, usefulness to the animal, etc.

To find the relative value of feeds I think the only thing to do is to find out how much the digestible matter in feeds costs and then compare one feed with another on this basis.

The following table has been prepared from recent wholesale prices, f. o. b. Philadelphia. Retail prices should not be more than $5 per ton over these wholesale prices.

Relative Cost of Feeds

The total digestible nutrients in one ton of feed is found by adding the digestible protein, the digestible carbohydrates and the digestible fat, times 2¼. For example, the 1218 pounds of total digestible nutrients in wheat bran are found in this way. One ton of wheat bran costs $46.20 wholesale. Dividing $46.20 by 1218 and multiplying by 100, the result is $3.79, the cost of 100 lbs. of total digestible material in wheat bran. This is the relative cost of wheat bran with all other feeds.

Feed	Total dig. nutrients in one ton	Per Ton	Cost of 100 lbs. total dig. nutrients
Cane molasses over 53% sugar	1184	43.50	3.67
Corn feed meal	1676	63.20	3.77
Wheat bran	1218	46.20	3.79
Standard middlings	1386	54.80	3.95
Hominy feed	1692	67.20	3.97
Ground oats	1408	56.20	3.99
Corn meal	1676	67.10	4.00
Ground barley	1588	64.70	4.07
Wheat mixed feed	1340	54.70	4.08
Flour wheat middlings	1564	65.20	4.17
Red dog flour	1584	70.10	4.43
Gluten feed	1614	72.70	4.50
Brewers' dried grains	1314	66.20	5.04
Linseed oil meal	1558	81.00	5.20
Cottonseed meal	1496	81.00	5.41

After figuring this relative value of the different feeds, then make up the grain mixture from these feeds as near the top of the list as possible and the resulting mixture must be the cheapest possible mixture. About half the feeds in a mixture must be high protein feeds and about one-third by weight must be bulky feeds. From the above list I would suggest the following mixture as the most economic dairy ration under present conditions:

200 lbs. wheat bran	$4.62
100 lbs. ground oats	2.81
200 lbs. hominy or corn meal	6.72
300 lbs. gluten feed	10.91
200 lbs. oil meal	8.10
1000 lbs. will cost	33.16
100 lbs. will cost	3.32
2000 lbs. will cost	66.32

Such a mixture would be suitable with mixed hay containing some clover, or with clover hay, and corn silage. With alfalfa hay not so much protein would be needed and the oil meal could be cut down to 100 pounds and the hominy or ground oats raised a little.

Amount of Feed

The question comes up, how much to feed? The old saying now familiar to every one is one pound of grain to three or three and one-half pounds of milk. This will do in general and is the best answer I can make. Many men think that with heavily eared corn silage that they do not need any corn meal or hominy in the grain mixture. I am inclined not to change the grain mixture any, but under conditions of much corn in the silage to feed less total grain.

Looking Ahead

This year's prices on feed emphasize two things: More legume hay, like clover or alfalfa, and more home grown grain with some protein in the grain. The problem today is to buy protein. Legume roughage will cut down the amount necessary and I would advise the trying of the following seeding mixture for home grown grain:

7 pecks of oats, 3 pecks of barley and 1 peck of peas. Best results seem to be obtained by using two-rowed barley in this crop.

How to Buy Feed

The best place to buy money is at the bank. Every farmer should pay cash for feed. I would not even have my feed charged until my milk check came. All farmers should arrange with their local bankers for regular service on short time loans. Get acquainted with your banker and learn regular business methods for the conduct of your business.

A saving of ten cents a bag on feed is the same as getting three cents more a hundred for milk. We all think that cooperative effort on the part of the Dairymen's League in raising the price of milk three cents a hundred is a fine thing. You will do the same thing for yourself if you will cut the price of feed ten cents a bag. We figure that one pound of feed will produce three pounds of milk. Then ten cents saved on 100 pounds of feed would be ten cents extra for 300 pounds of milk or three cents per hundred pounds. The paying of cash will always effect a discount of three to five percent on a feed bill and in addition to a percentage off for cash, the cash customer always gets the best prices. Therefore, the most economic dairy ration under present conditions is the ration bought for cash.

You really ought to have it around butchering time: "The Curing of Meat and Meat Products on the Farm." A postal card request for F 119 to the State College of Agriculture at Ithaca, N. Y., will bring you a copy.

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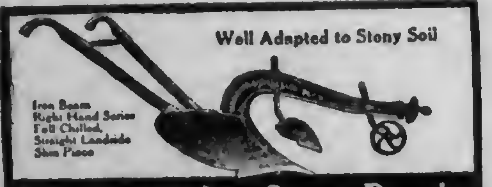

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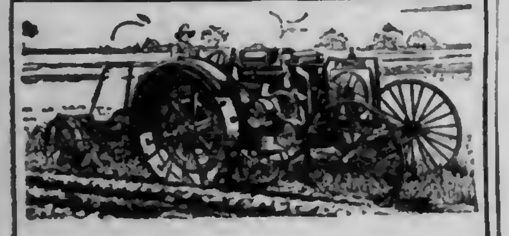

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HORTICULTURE

GREENHOUSE RADISHES

Radishes by the thousands in midwinter is an achievement of the greenhouses at the Walter Reed Hospital near Washington, D. C., and at the season of the year before the markets are filled with the inexpensive product from Southern States, greenhouse radishes net the owner a pretty sum. They are easily grown in a relatively low-temperatured house, and may be made to fit in well with the general greenhouse scheme. They may also be made a profitable crop on farms where an improvised hot-house system is available.

The outstanding feature of the production of this crop is that harvests may be made to succeed each other rapidly, giving a relatively steady flow of radishes to market.

Preparing Soil for Radishes

The crop at this set of greenhouses is started in the fall as soon as outside conditions prevent the growth in the open fields. From the seed to the marketable crop requires from ten to twelve weeks. Last fall the first beds were planted on October 3, the last radishes of this lot being out of the ground and sold by December 16. The first radishes were pulled for market in six weeks from planting time. This is usually too long for radishes to stay in the ground, but the long maturing period was due to the absence of heat.

In order to maintain a constant market supply, a second bed was started October 16, the beds being cleaned up and reseeded by January 2. A third lot was started on November 1 and entirely off the ground by January 15. There is no question in the mind of the manager that much quicker work could be done, but a course was followed similar to that used by growers who desire to hold the crop in the ground for a short time awaiting a more favorable market.

Preparing Beds For Seeding

Starting in early October with beds 5 by 155 feet, the first layer was a 2-inch covering of well rotted cow manure, laid directly upon the boards. Upon this was laid a fairly rich layer of soil, well textured and smoothed by means of a small fork or with the hands. Over the top was scattered a complete fertilizer which analysed 2 percent nitrogen, 8 percent phosphoric acid and 2 percent potash. This was very lightly worked into the upper half inch of the soil. Subsequent waterings will carry the plant food down so that the roots can get at it.

The next process was to mark off the rows for the radish seed. A handy little device constructed of wood and marking two rows at a time has been a time and labor saver. Two strips of wood, each five feet long, are connected with cross pieces 10 inches long. Pressing this marker into the soil lightly, a row ½ to ¾-inch deep is made. The seed is now distributed in a thin line along the row, theoretically leaving a seed at each half inch of row space. The seeds were put in a stiff envelop, one end of which had been cut off. This served as a dropper.

In covering the seed the manager draws two fingers down the row, one on each side of the seeds. This brings the soil up against the seed barely covering it. Then, a gentle smoothing of the entire surface with the palm of the hands makes the soil firm about the seeds but not packed. Firming the soil is as important in the greenhouse as out in the field; it brings the moisture in contact with the seed and starts sprouting more quickly. In the open field the same process would be accomplished by using a rake to firm the soil, the teeth making the soil come in contact with the seed and yet not packing it.

The young shoots began to come thru the soil in five days from planting. During the entire growing period the bed was watered as often as necessary and the soil mulched to keep down the weeds. It is very important in watering to prevent damping off, a common trouble when too much water is applied at any one spot. When this occurs in the greenhouse, the young plants are pulled and the space filled by others secured in the thinning process. Before watering, the soil is scuffled to encourage better distribution of the moisture.

Temperature Relatively Low

Experience shows that the best temperature for radishes in the greenhouse during the day is 65 to 70 degrees and at night 55 or a little below, radishes coming in the same class of hot-house crops so far as temperature is concerned as lettuce, cauliflower and beets. As heat was not started in these greenhouses until late in the season, the temperature ran a little under the above degrees, which accounts for the long maturing period.

When the radishes reached a height of 1½ inches, and had two or occasionally three leaves, it was necessary to thin the rows. The young plants thinned out could have been transplanted, but experience does not show that this would be worth while. The most successful thinning distance is 1½ inches. Some rows were thinned to about an inch but the beds did not do as well as with the 1½-inch distance. Altho the space between the rows is 10 inches, this might be made less and the output of the beds increased, and better in this way than by cutting down the thinning distance.

The radishes were ready for harvest beginning in six weeks from seeding. They were pulled with an eye to better allow the slow maturing ones more room, unless additional space was immediately needed for new plantings. The crop was entirely off the beds in 12 weeks after planting.—C. R. Howard.

SWEET POTATOES

We are now eating the Nancy Hall yams. Our growers are like the Georgia Farmer who told me when the Kolb Gem Watermelon was popular. "We grow Kolb Gem melons to ship North, but we also grow good ones to eat home." Our growers ship the kind of potatoes which the northern people prefer, but they also grow Nancy Hall for those home folks who know a good sweet potato. The Dry Jerseys will do for people who cook sweet potatoes by steaming or boiling them. Nancy would not submit to any such cookery. She must be nicely baked or roasted in hot ashes as we used to do in the days of the big kitchen fireplaces. Then, with the skin pulled off you have a jellied mass of which the New Englander would take for pumpkin pie, only it is better.

The sweet potato crop here this season has been a remarkable one, both in extent and yield. Every farmer planted from 10 to 50 acres. Crops of 500 bushels per acre were not uncommon and the general average so far as I can ascertain is fully 300 bushels. When a man brings to the station and sells 800 ⅝-baskets an acre, the sweet potato crop becomes a very profitable one.

Two varieties of the Yam class are grown here. One is the Hayman. This potato was brought to Virginia many years ago from Brazil by an old Sea Captain named Hayman. Years ago, the late B. K. Bliss a New York Seedsman, got hold of it and sent it out under the name of Southern Queen, and it is still known by that name in many sections of the country. It is not a high class potato, tho it gets good in the spring. This potato is known simply as The Yam in the Baltimore market. There is a host of these sweet, jelly-like yams grown in the South. I have grown and eaten many of them, but have never found a better one than the Nancy Hall, which is very much like the Pumpkin yam of Georgia when cooked. The chief varieties grown here for shipping are the Big Stem Jersey and the Gold Skin, these being the sorts mainly in demand North. But after a man has once had the pleasure of eating a well-baked Nancy Hall it is a mystery if he prefers the Jerseys any more.—W. F. Massey, Wicomico County, Md.

A square deal always pays.

FARM STORAGE OF FRUITS AND VEGETABLES

Some twenty years ago my father built a small storage house which has given and is still giving very good satisfaction. The excavation was made twenty-six feet straight into the north side of a steep bank, and as built the top of the back end is even with the surface, so that two-thirds of the building is under ground.

The building is of hollow tile, 9x18 inches, with cemented joints. The inside length is 25 feet, width 9 feet and height 7 feet. A frame of 2x4s on a piece of 2x8, laid flat on top of the wall extends out 4 feet in front. On this the roof is set, making a projection over the door.

It has been found necessary to add some protection to prevent frost from entering thru the tile wall of 9 inches thick at the sides of the door in front where it is exposed to the north wind in winter, and this is done by a temporary frame work filled with straw.

A tight board floor is laid on 2x6 joists over head, and on this is a foot or 15 inches of dry sawdust. More would be better.

A ventilator 12x12 inches extends from the ceiling near the far end up thru the roof. In the coldest weather this is closed, or partly closed with a sack filled with shavings or straw.

The door, 3x6½ feet in the north end is of plank. An inside door of heavy screen wire keeps out rodents. The ventilators and drain are also protected in this way. There are no windows.

Inside 2x4s are laid across the ground floor every 4 feet, and on these, horses are set up. These are made of 2x4s and are 3 feet wide with cross pieces to support the shelves, nailed on every 2 feet. The shelving boards are laid in these horses to form bottoms and sides of the shelves on which the fruits or vegetables are placed. All these inside fixtures are removed in summer to allow them to dry out, and by exposure to the sunshine are quite well disinfected.

In spring, summer and fall, the door is kept open or partly open at night to allow the cool air to enter, and is kept closed in day time to keep the warm air out. Apples and pears keep their flavor well in this house and do not wilt. There are often a few of the long-keeping varieties of apples left on the 4th of uly. Potatoes and other vegetables are kept in good condition until late spring and early summer.

Apples would no doubt ripen slower and generally keep longer if the temperature were kept a little lower than is safe for potatoes, but for common home and farm storage of fruits and vegetables this little house has given fine satisfaction when given simple but regular attention. There is one improvement that should by all means be added, the front should be inclosed with storm doors.

I see no reason why such a storage house could not well be built of concrete. The under ground feature is valuable, and if well drained, the ground floor is best for this kind of house on account of supplying the regular and constant moisture that is so essential in the keeping of both fruits and vegetables in the best condition.—T. L. Wall, Clearfield Co., Pa.

FEW APPLES EVAPORATED

The apple evaporator season in New York has come to a close after one of the briefest runs in recent years, the pack being possibly the smallest for any year having a partial crop of fruit. The output is estimated at around one-seventh the average pack, or 250 cars of prime and choice stock, 100 cars of cores and skins, and about 50 cars of chops. For leanness of production these figures have been smaller only in years of near total failure of the crop.

Coupled with the poor showing in Western New York of the crop in general, a second factor serving to curtail the output was the formidable competition offered by the vinegar plants in their rush to get supplies. The effect of imminent prohibition was an unusual bidding for apples by the cider and vinegar plants and much stock went to the mills that ordinarily would have found its way to the evaporators.

A resume of conditions during the season has been given out by O. J. Deimarle, one of the selling agents for the State Evaporators Association, and in part he says:

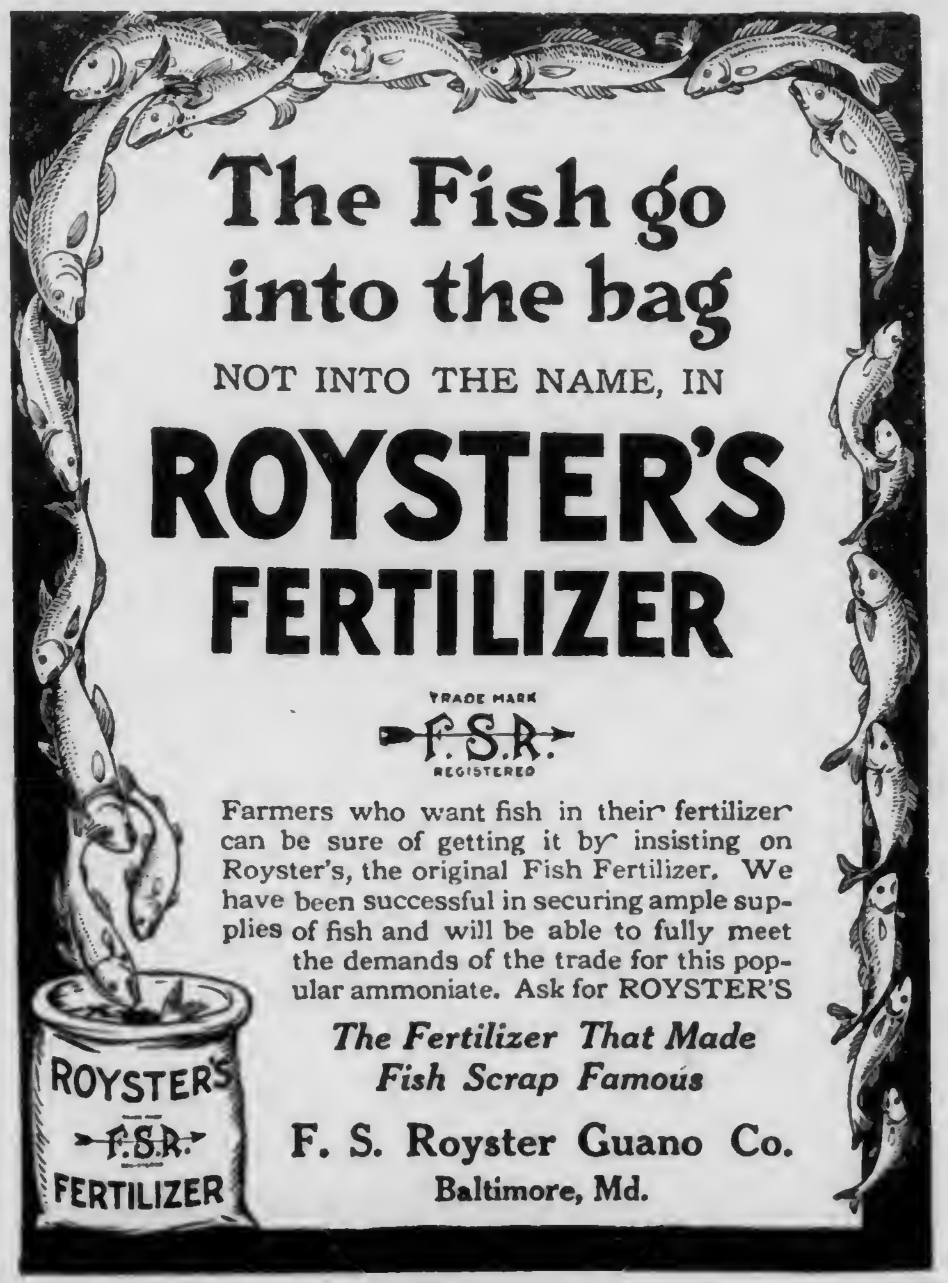
"During the early spring months indications were for a fairly heavy bloom of apples, indicating a fairly good crop. On these conditions there were a good many sales made at prices running from 15 to 18 cents a pound for prime stock. A little later, thru poor weather conditions during June, the crop outlook deteriorated heavily and this stopped selling generally with the producers practically until the operating season started. During the summer months there was considerable trading by the New York exporters on contracts for future delivery, and with the light offerings from the producing section the market worked up to a basis of 25 cents f. o. b. in boxes for fall delivery on prime. As long as no offers were obtainable from the producers end these prices might have gone to almost any limit, as the Western market followed the New York state market to a great extent.

"When production from Arkansas started prices began to drop generally all over the country. The Arkansas production was unusually large for that section and prices dropped as low as 12 cents a pound to the producer. These low prices naturally affected New York conditions and when our evaporators opened their plants, apples were offered at around 19 cents for prime in boxes, while Arkansas was quoting there at from 14½ to 16 cents.

"At the opening of the producing season the prices at which the farmer was holding the fresh fruit made it very dubious for the Western New York evaporator as to whether he could afford to run or not. The apple crop at that time appeared to be so light that in different parts of the state a large number of plants did not open. This curtailed the demand for apples to a certain extent, enabling about 25 percent of the evaporators to open up, and those who did run have had a very fair return for their efforts, notwithstanding the high prices paid to the farmer for the fresh fruit.

"It has been found by a number of the makers that they can afford to buy handpicked fruit at higher prices and get better results in the prices from their output than they can by buying the ordinary cheaper stock and a drive will be made to induce all evaporators wherever possible to buy as high grade fresh apples for their product as is possible in the future."

The outlook for apple growers is good.—Alvah H. Pulver, New York.



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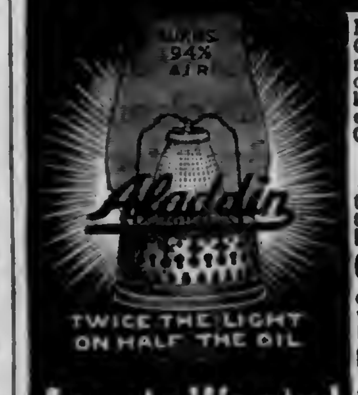
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Agents Wanted

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Ever work on a job all day long with wet, cold feet? If you have, you'll be glad of the soft, fleecy lining in this new overshoe that keeps your feet always warm and comfortable. *Dry*, too—it's absolutely water-tight!

Think of having an overshoe as warm and convenient as an arctic—as water-tight and easily cleaned as a rubber boot! That's the new U. S. Walrus—don't forget that name! In every way it's the farmer's ideal overshoe.

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"U. S." Walrus—An overshoe with an all-rubber surface that can actually be washed off after wearing. Warm as an arctic. Absolutely water-tight. All weights and sizes; in red, black, and white.

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No matter how much you're on your feet, nor what sort of work you do—you can find in U. S. rubber footwear exactly what you need.

There's the U. S. Arctic, designed especially for wear in cold, snowy weather; U. S. Rubbers, made in all sizes and styles for men, women, and children; U. S. Bootees, which lace smoothly over your sock like an ordinary shoe, yet are as water-tight as the Walrus; and U. S. Boots, which you'll find described below.

Every one of these models is made with the same care in the details of construction as the U. S. Walrus. Tough, heavy soles—special reinforcements at toe and heel—and *always* the highest quality rubber—these points are winning U. S. rubber footwear thousands of new friends every year.

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"U. S." BOOTS—REINFORCED WHERE THE WEAR IS HARDEST

1—The sole—Five soles in one, all of the finest rubber.

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"U. S." **Boots** are made in all sizes and styles—Short, Storm King, Sporting and Hip. In red, black and white.

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HOUSEHOLD

NEW HANDKERCHIEF FANCIES

Fancy handkerchiefs are in fashion again, and it would be difficult to imagine anything more exuberant in design or color. They are printed on fine lawn, and are what is termed "suit handkerchiefs."

The introduction of color has made the handkerchief as a gift an all-year-around fad. There are symmetrical patterns in color, and solid colors with narrow white hem-stitched borders or white rolled edges.

There is also a revived interest in lace-trimmed handkerchiefs. The demand for these is now as large as it was ten or fifteen years back. Some of them have a pleated net edge.

The extremely high cost of hand work has made it impossible to put much hand embroidery on handkerchiefs nowadays, except the expensive ones, and since show is what is desired in this class of merchandise there is a reversion to Swiss hand work. To those not familiar with this ornamentation it looks very much like hand embroidery. One of the newest popular designs is a corner design in pastel shades, with a tiny pink rose appliqued on by hand.

Hand-woven linen handkerchiefs with corded borders or hand turned hems are much shown, and sell well. Some have hem-stitching, with borders one-half to two inches wide, the latter being popular for mourning handkerchiefs. For men, linen handkerchiefs with the corded bordera or hand-turned and hand hemstitched hems are the best sellers.

In a box of a dozen colored handkerchiefs there will be frequently nine different colors or shades. In lavendar, for instance, the shades will run from mauve to deep orchid. Both the hand-blocked and the solid color linen handkerchiefs are put up this way. They are among those imported from France.

Handspun linen handkerchiefs made to order for many of the wholesalers are just arriving, and of course are very expensive. This industry is said to be dying out because the women who heretofore made them are leaving the work for more remunerative lines.

Cut-edge handkerchiefs are seen in the lots ordered for the coming holiday trade, and one also sees the doubled work, crossbar cording and fine revering. Even on men's handkerchiefs there is some decoration seen.

Silk handkerchiefs are things of the past, as are also the old bandanas, which cost four times what they did five years ago. But other bright-colored handkerchiefs are being made up into kimonos by women clever with their needles, and these are worn with breakfast caps to match. Bags of various descriptions are also made of these bright-colored handkerchiefs.

We have even seen the lace trimmed handkerchiefs made into dresser scarfs; also the plain colored corded ones. And sometimes the solid colored kerchiefs are thus used, being joined by crochet or Val lace. The white ones are put together with dainty lace insertion, and lined with the predominating color of the room decoration. And these handketchiefs are often used for making pin-cushion covers. Camisoles can be made of them also, by cutting them in two, and putting the border at the top, running in a ribbon and adjusting ribbon straps. The kerchiefs are joined with fancy crocheting.—Esther A. Cosse, Passaic Co., N. J.

PREPARING SWEET POTATOES

Creamed Sweet Potatoes

Select sweet potatoes of the same size and boil in their skins. Plunge a moment into cold water when done, and take off the skins carefully. Arrange in a pan, and over them while still hot put one pint of sweet milk, butter the size of an egg for 10 potatoes, salt and a little red pepper. Rub 1 heaping tablespoon of flour smooth in a little cold milk and add to the potatoes. The sauce should be very thick. Roll the sweet potatoes in it without breaking them until all are well coated. After the milk is added they should be cooked only long enough to thicken the sauce, and roll them well. Serve at once.

Browned Sweet Potatoes

When roasting beef take out one cup of fat drippings and put in a frying pan. Add 12 medium sweet potatoes that have been pealed and boiled. Fry slowly, turning often until a rich brown. Serve with the drippings in a deep platter.

Sweet Potato With Chicken

In frying chicken for company put aside the necks, tips of wings, ribs and other poor pieces. Make ready one fair-sized sweet potato for each person with several extra, and have them skinned and hot when the pieces of chicken in the separate frying pan are nearly done. Add plenty of butter or drippings, and put the potatoes right in with the chicken. Fry until a rich brown and serve on a platter without the bony pieces of chicken. If fried with the chicken intended for the table the fat will be spoiled for the gravy.

Baked Sweet Potatoes

Rub clean potatoes slightly with a greased cloth or a bit of paper dipped in a little butter. Bake slowly till well done. These can be eaten, skins and all, with salt and butter.

Fried Sweet Potatoes

Cut cold sweet potatoes into long strips and put in a frying pan with a little butter. Fry slowly and turn carefully so they will not break.

Candied Sweet Potatoes

Arrange hot sweet potatoes in a dripping pan after they have been boiled and skinned, or peeled and then boiled. Shake over them salt and pepper and about one tablespoon of brown sugar to each four sweet potatoes. Dot with butter and place in the oven to candy. Turn when one side is a rich clear brown. Do not scorch. These can be done on top of the stove if in a hurry, but are apt to burn easily.—Mrs. W. C. Kohler.

A LESSON IN ACCOUNTS

My wife has a trait of keeping eternally at it. Her "at it" is keeping on the job of asking me a question that keeps me on the financial job. When I met her I was a clerk in a country grocery store and post office. I was so completely captivated by her independence that the country store was too confining. It did not give me enough time to pursue the independent creature and take my lessons in financeering, so I resigned and went to work at odd jobs. What I pursued in a companionship way took hold of me in a financial way. She insisted that I register in black and white every dollar I earned and every dollar I spent, and thus know where I was at. For four years she sweetly insisted until I was on my financial feet sufficiently to ask her to name the day.

The day was fifteen years ago and she is just as good a booster at book keeping as then. I made her a solemn promise to do a little figuring every night before retiring, but my natural tendency is to forget it. But can I? No! Never. If she doses off to dreamland without asking if the book is done, then the next morning while I am dressing, out comes "Have you done your books?" and I am glad to slip in the den, pajama clad if necessary, and do it.

Any man who cannot succeed with such splendid perseverence and good financeering as she puts over back of him, does not deserve success. She does not ask anything of me she does not do herself. She keeps her own accounts and handles her own money.

She will always be rich in money because first she is rich in heart and mind and soul, and she will use her God-given gifts to good advantage. She is not satisfied with being good one day a week, she wants to do right seven days a week and she has more keep "at it" in one hand than I have in my whole body when it comes to account keeping, for I despise figures. But she is as painstaking with a dollar as with $100 or $1,000, and by the respectful treatment of the ones and keeping everlastingly "at it," we now each deal in the thousands.—A. S. Lupton, Cumberland Co., N. J.

SUGGESTIONS

A Lap Board Convenience

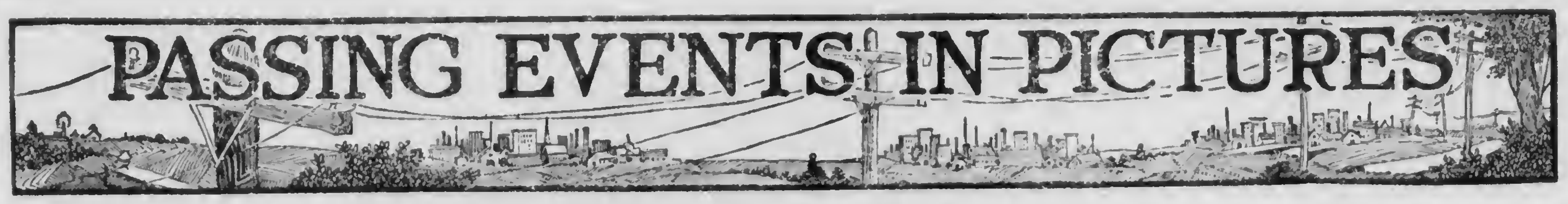
We have all enjoyed the lap-board writing-desk. One snuggles back into a deep arm-chair and with board placed across the arms, pencil or fountain-pen in hand, the letters—long due some loved one—are soon under way. But have you ever tried the board in a sick-room? The invalid, seated in an arm-chair, has the board resting on the arms, and with tray placed upon it assists himself so ably that one is greatly relieved both in time and service.

A Trunk Strap in the Sick Room

Another sick room convenience is a strong trunk-strap buckled over the railing at the foot of the bed. Lay the strap alongside of the patient and it is simply surprising in how many ways he, by means of the strap, can change his position, and help support himself when drinking or eating. One party, whose bed had no railing, had a strong handle screwed to the footboard, into which the strap was buckled.

When there is a gurgling in your lavatory, use a long handled buttonhook, groping for the obstruction, and often the same is fished up on the hook with but little effort.—Louise White Watson.

Old cabbage stumps left in the garden harbor next year's pests.



PASSING EVENTS IN PICTURES

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Photo Copyright by Underwood & Underwood)

1.—Anti-Aircraft Gun For Protection of Panama Canal.

2.—A Thanksgiving Bonfire Breakfast Enjoyed by Y. W. C. A. Girls.

3.—Secretary of War Baker Leaves on the Great Northern for Panama.

4.—Children Just Naturally Love to Work With Apples.

5.—A Returned Soldier With a Great Dane Dog Captured in Battle.

6.—Children of the Executed Revolutionist, General Felipe Angeles.

7.—Gen. Felipe Angeles, a Mexican Revolutionist Executed by the Government.

8.—John L. Lewis, President of the United Mine Workers of America.

9.—"Pussyfoot" Johnson, American Prohibitionist, Mobbed by English Students.

Help the Hens to Lay Winter Eggs

Losing the old quills and growing new feathers taxes the hen's strength—cuts down the supply of eggs. After moulting, hens need a tonic that will build good red blood and tone up the egg producing organs. Every morning they should be fed

RUST'S EGG PRODUCER

You simply mix one tablespoonful to a quart of meal or bran for every dozen fowls. Add just enough water to make it of a crumbly consistency.

Soon they cackle and cluck. Combs become a healthy red. They lay with increasing regularity. **Rust's Egg Producer** means healthy industrious, scratching hens throughout the winter. It produces eggs when eggs are worth the most.

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BEWARE OF ROUP

Now is the time when Roup makes its appearance—a deadly contagious disease. Symptoms are watery discharge from eyes and nostrils, sniffling and wheezing. Immediately separate diseased fowls, spray the premises with **Rust's Lice Liquid and Disinfectant** and treat with **Rust's Roup Powder.** Splendid for roup, colds, catarrh. Simply put in drinking water. Fowls take their own medicine. 3-ounce box, **36 cents,** postpaid.

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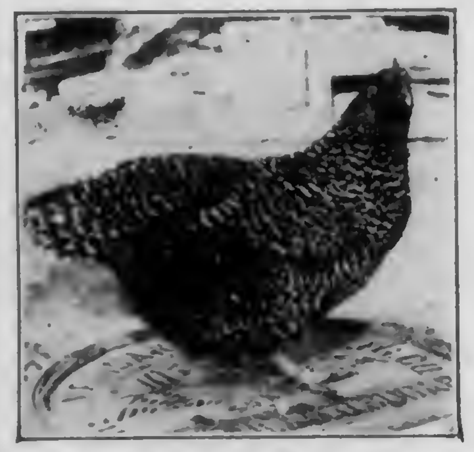
POULTRY

WHY DON'T THE FARM FLOCKS PAY?

Most of the farm poultry of this country is kept as a matter of convenience rather than for real profit. Instead of making the poultry an important part of the farm live stock many farmers look upon it as a necessary evil. The care is usually given over to the women without providing the necessary conveniences. In general the farm flock is kept to assure a supply of eggs for the family and an occasional fowl when company or the minister is coming. The feed provided is often wholly that which the farm may supply without regard to its meeting the needs of the birds for egg production. Frequently they are housed either under too exposed or too close and damp conditions. In the day time the hens pick up much of their food in the wet and filth about the buildings. Of course, there are those on the farm who look upon the poultry as an important class of live stock and who give it the same good care they do the other animals and who, therefore, find it a useful source of profit.



Well Marked P. Rock Hen.

In visiting many farms I have had a chance to notice the conditions under which the fowls are kept and have made note of the things lacking that seem to me essential in order to reap a good profit. In the first place there is too much mongrel poultry on the farm. Birds that are bred for no particular purpose and with little regard to their adaptability for profitable egg production. This condition is not so general as it was a few years ago. There is an increasing tendency to keep pure bred fowls, but even now many farmers fail to consider their adaptability for the main purpose for which fowls should be kept. We are apt to think too highly of the general purpose fowl—the one useful for egg production and that will at the same time furnish a lot of valuable meat. We fail to consider, as fully as we should, that it is much the same with the hen as with the dairy cow. Farmers in general have long ago discarded the dual purpose cow and yet many hold tenaciously to what they call the general purpose fowl. With the hen, as with the cow, you cannot expect to find two useful characters highly developed in the same animal or type of animal. In the case of the general purpose fowl it has been found, by close inspection, that those that come closest to the type of the egg producing breeds are the best layers. This characteristic has been taken advantage of by some observing poultry keepers so that they have, by careful selection, built up a strain of very heavy layers out of a flock of very ordinary layers.

Many are misled by the belief that the heavier fowls are more profitable because they furnish so much more meat when wanted for that purpose. For example, in rearing chickens, many argue that so much more can be gotten for the three pound Rock or Wyandotte broiler than for the two pounds Leghorn broiler that the former must be more profitable. These persons fail to consider how much more cheaply the two pound broiler can be grown than the three pound one. Poultry specialists tell us that the quicker the cockerels of the flock can be gotten up to the two pound weight and marketed the greater will be the profit. Furthermore my experience has been that it is as easy to get the Leghorn laying sufficiently to pay its way at six months as it is the Red at seven months. The same will doubtless be true with the other general purpose breeds, such as the Wyandottes and the Rocks. This extra month needed to bring the general purpose fowls to profitable production means added cost in rearing of thirty to thirty-five cents a bird.

The question of housing, especially in Winter, is one that has not received proper attention on many farms. Tight houses, where frost will accumulate on the ceiling and walls very cold nights, are worse than open front sheds. Fowls will withstand, without discomfort or harm, much cold providing their quarters are dry. Dryness cannot be provided with certainty unless the windows are kept open to some extent and the dampness be allowed to escape. Dry floors of wood or cement are best but earth floors made of gravel or cinders are good if the drainage is such that no water can get underneath within two feet of the surface. Well aired and dry quarters, where the litter is always dry are very essential for profitable egg production in winter.

Another very essential factor needed to assure abundance of eggs in winter is to have the pullets reach the proper age for laying before cold weather comes. This means that the chickens must be hatched at the proper time in the spring so that they will be six months old, in the case of the Leghorns and seven months old for the American breeds somewhere between October 20 and November 20.

Placing the pullet flock in their winter quarters several weeks before they are expected to lay and the liberal feeding of a variety of egg producing foods during this time is essential to develop the egg producing organs. This heavy and rich feeding can be brought about gradually according to the appetites of the birds. As soon as egg production begins the amount of food needed will be much greater. During the short days of November and December it really means stuffing with a variety of wholesome feeds. A dry mash with 15 to 20 percent of beef scrap may be safely kept before the pullets at all times. On the farm a variety of grains, such as new corn, oats, wheat and buckwheat are almost always available in the fall. These should be fed in liberal amounts, in variety and often enough to keep the birds very active working for their feed in the litter. I have found that wheat and buckwheat fed in the straw gives the fowls work and that they clean up the grain with very little waste and have a nice lot of litter left.

On the farm skim milk can often be spared for the poultry and it is a most valuable food. It may be fed sweet or sour and in case wet mash is fed the milk may be used to moisten it. I prefer to feed the mash dry and to give the milk as drink. When skim milk is fed liberally the beef scrap part of the ration may be reduced, as skim milk is rich in protein. Some of the feeding tests at the Experiment Stations have shown that skim milk fed with part of the usual beef scrap was more economical and profitable that where the full beef scrap ration was fed.

I have found poultry one of the most profitable branches of live stock on the farm. The farm flock is one of the best means for converting much of the low grade products of the farm into a condensed and highly valuable product that it costs but little to get to market.—C. S. Phelps, New York.

—What is the experience of our readers, the owners of farm flocks, as to the profitableness of dual-purpose breeds such as Reds, Rocks, Wyandottes, etc., as compared with Leghorns, and other smaller breeds?—Editor.

A PLEBEIAN POEM

I had some pretty pullets
  But they simply wouldn't lay.
So I visited a poultry farm
  About a mile away.
And there I saw so many things
  To note and to admire,
I then and there resolved that I
  Would make my egg-yield higher.
So home I went and carefully
  I looked the hen house over,
And saw too that within the barn
  Were straw and feed and clover.
Then back again with hoe and fork;
  Wheel-barrow and a broom.
To clean the roost, the floor and nests
  In that dirty little room.
The litter then was forked into
  The old capacious barrow
And wheeled up to the new dung-pit
  (And spread upon the morrow.)
The grimy little windows
  Were pried then from their places
(And now a very neat cold frame
  The garden's south side graces!)
Across the place where once had been
  The ancient little windows,
A wire screen was nicely tacked,
  So when the winter wind blows
Or when a zero night comes on
  We drop the burlap curtains.
(A few bran bags placed end to end
  Are good as any "boughtens"!)
And on the floor beneath the boards
  On which the roosts are fastened—
Were placed nest boxes strong and clean
  With self-feeder adjacent.
Then in the nests and on the floor
  The straw was used unsparing.
While next upon the program
  Came a very thoro spraying,
A clean dry mash of oats and wheat
  And corn, beef scrap and grit.
Ah, never did my pullets find
  A meal more fine than that!
With butter-milk and water warm
  And whole corn once a day,
And clover heads all nicely steamed
  Those hens began to lay!
Mere fiction this—an idle tale
  By idle theorist spoken?
I wish that you might see those hens,
  My tale would stand unshaken!
    —One of those "County Girls."

STATEMENT OF PRINCIPLES FROM THE NATIONAL GRANGE

At the recent meeting of The National Grange at Grand Rapids Michigan, the voting members of this body, having before them the work of the recent Industrial Conference, of which its National Representative was a member, and the call of President Wilson for a new industrial conference, adopted unanimously the following resolution:—

The Condition of Agriculture

"The Industry of Agriculture as a whole is now facing an economic condition which should be seriously considered by all the people, and which may result disastrously if not speedily cured.

"Under this condition the demand of people not engaged in agriculture for cheaper food is ill-advised, untimely, and may defeat its own purposes. The cause of high prices is not out on the farms. There is no relaxation of effort to produce by those who remain on the farms, but a steady drift of people away from the farms. This is due to the inadequacy of return on capital invested, and labor and ability used in Agriculture.

"The Grange demands that pressure directed against food producers in the effort to reduce the cost of food be stopped before it results in such accelleration of the decline in Agriculture as will leave the farms and farmers unable to feed the nation. The Grange demands that the complaint against high prices be directed to the place where high prices are caused, the cost of the labor and the high profits in food manipulation and distribution; and the high cost of the labor, equipment and necessities which the farmer must buy.

"When the two-thirds of our people who are consumers of food products and not producers thereof clear themselves of the responsibility for high prices then they may come with "clean hands" to either criticise or help the other one thirds which is engaged in food production."

A HOME WANTED

To the dear readers of Pennsylvania Farmer:—

I have promised to write for a little boy who wrote me a letter some time ago, telling me that he would like to have a home on a farm. I could not give him the kind of a home I feel he ought to have as I have promised to take a little nephew. The name of the little orphan is Peter Clyne and he lives in Clearfield, Pa. I told him I would write to the farm paper, and hope some good, kind people will write to this little fellow whose heart is beating for a good home at this Christmas-Tide, when all the poor children are wishing for something good and something nice. Has some good Christian home a vacant chair in it, and would not some one be glad to have a poor, little, bright-eyed boy dance with glee around an Xmas tree with rosy apples on it, which city children seldom see? I have seen little Pete. He is a bright-eyed little fellow about 8 or 10 years old. Now, I will wait to see in the paper who is willing to "do unto the least of these," and who has given little Pete a home.—O. S. F.

The man who looks over his cattle every day to see how they're coming on, but doesn't go to the school once in a while to learn what his children are doing, has a wrong idea of values.

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RAISING BASKET WILLOW

Osier, or basket willow, is a crop but little known outside of Wayne County, New York. It is claimed the country's heaviest production comes from the town of Galen. The largest farm, devoted exclusively to this crop, is owned by two sisters of this town.

Every year this unique farm is covered with a forest of liliputian trees, thousands upon thousands in number, which grow up in the spring, reach a state of satisfactory maturity during the summer, and are then cut down and harvested in the fall and early winter. On the Barnes farm this process has been going on year after year for nearly forty years.

It is somewhat remarkable that the cultivation of an agricultural product like this willow, which can be grown so easily and with so little expense and for which there is said to be a strong demand in the market, should be confined almost exclusively to one locality. The probabilities are that it would thrive well and prove a profitable crop over a wide range of territory, turning many waste places into productive lands. The explanation of this apparent mystery may lie in the fact that the subject of willow cultivation is little known.

Basket willow was introduced into this country from Germany ninety years ago. It was brought over by a party of emigrants who came to the United States to find employment in the salt plant works located at Liverpool, N. Y.

The willow is a hardy plant and the thrifty German folk, who brought it as a memento of the fatherland, knowing its qualities, expected it would grow and thrive in the new home across the seas. Little pieces of it were set out in the gardens surrounding their humble American homes. The willow fulfilled the expectations concerning it. As more land was acquired, more and more willow was grown and after the regular day's work was done, long evenings were turned to account shaping the willow into baskets which were sold thruout the neighborhood. Gradually the sales extended into adjoining neighborhoods.

Some sixty years ago Rev. Mr. Waldo, a Lutheran preacher, left Liverpool and settled in the town of Lyons. He carried some willow "sets" with him and, in connection with his ministerial duties, carried on a willow farm and eventually became prominent in the business. About forty years ago the elder Barnes obtained a lot of willows sets from Rev. Waldo and started what has grown to be the largest willow farm in this country.

A willow farm is started as follows: Willow sets of a two year's growth are cut into lengths of ten inches each. These are set in the ground one foot apart, in rows three feet apart. These pencil-like sets are planted right side up; that is, the larger end goes into the ground first, preserving the relative position it had on the parent plant. It would not be fatal to the growth of the plant to put the sets in upside down, but in this case the shoot which sprouts from the top of the set, would start growing towards the ground before taking a turn upwards, forming an undesirable crook.

The set is left sticking out of the ground about half an inch. It will be there years before the sets reach a condition of profitable bearing. Following this for a period of five years, they will do their best growing, after which the plants begin slowly to deteriorate, until at the end of twenty-five years, when they have to be taken up and replaced by new sets.

Low muck land with a clay subsoil is the best in which to grow basket willow. Any land that will grow corn or grass will grow willows. Land subject to an annual overflow, which fertilizes the soil is excellent, but not wet land. In the town of Galen much land considered almost good for nothing is producing a profitable willow crop.

Sets may be obtained in the fall, but the spring is a better time. The sets are very hardy. They may be left out doors all winter, and then, if set out will sometimes grow, but alternate freezing and thawing, will kill them. An interesting peculiarity in regard to the germination of the sets is the fact that the roots do not start from the buds, but come out all over the surface of the set much like the beard on a man's face. About the only care the crop requires is to keep the weeds down. The crop is fertilized by its own leaves.

Scene in the Mountains of Tennessee

Three tons to the acre is considered a profitable crop. Land sometimes produces six to eight tons per acre. It takes three tons of green willow to make one ton of white or peeled willow. It takes six to eight weeks to harvest the Barnes crop. The willows are cut with a sickle-like knife and the whips, which are six to eight feet long, are tied into bundles about the size of a corn shock, loaded into wagons and drawn directly to the cars.—A. H. Pulver.

IN THE TENNESSEE MOUNTAINS

So much romance has been written about the mountaineers of Tennessee that we are glad to have the following from a resident of that place. —Editors.

High up in the rugged, picturesque mountain region where the sunkissed peaks pierce the clouds; where the mocking bird's song wakes the echoes in the early morning hours, and the whippoorwill chants his mournful refrain at twilight; where the wild flowers bloom almost the year round and all nature is grandly beautiful—here dwells a race of honest, hospitable people. The rough cabins are surrounded by old fashioned flowers not arranged according to the latest style in landscape gardening, perhaps, yet showing that these people have a love for the beautiful.

Each farmer has his corn patch, usually too rough to be cultivated with a horse, so the hoe is depended on to raise the crop. Most of them raise corn for bread, and to feed a cow, and hogs for meat, sometimes a horse, nearly always a dog—sometimes two. The corn is taken to the old fashioned buhr mill in the valley where it is ground into meal from which is made the corn pone for which the south is famous. It is often baked in an oven before the fire place.

Almost all mountain farms have an orchard from which enough fruit is canned, dried, and preserved to do a year. The hills are just suited to peaches, apples and pears. Great kettles of apple butter are made by each family for winter use.

Each farm has its flock of hens and they go a long way towards paying the grocery bills which are not large, as nearly everything needed is raised at home. The mountain folks are very hospitable and kind, and one would travel far before finding a better, kindlier, more contented people than the Tennessee mountaineers.—C. H. A., Johnson City, Tenn.

PREFERS HORSES TO AN AUTOMOBILE

I am very much interested in the replies to "Bachelor;" published in Pennsylvania Farmer, and wish say that my experience is that the boys and girls who go off to the city do not have much "backbone."

A sensible girl is going to stay where she can better conditions. To be sure, we don't like so much drudgery, and we like the conveniences that our friend, "Bachelor" mentions; but when it comes to the automobile, I don't think it is as nice as a pair of spirited horses and a carriage. My experience with an automobile is that when you want to go, the engine often says, "No."

We "Farm Girls" like to go out and pet the cows and horses but we don't like to have to do the milking and tend to the chickens all the time. We have never had a milking machine, but I presume when conveniences become more common on the farm, the farm girls will be more willing to stay in the country.—A Delaware Farm Girl.

ARE YOU REGISTERED?

If your father has a pure bred calf, colt or pig, that animal is registered by name or number and the record kept most carefully. It is doubtful if a search of the records would show that a million or two owners of pure bred animals have failed to record the birth of their valuable stock. Yet you may be surprised to know that the federal children's bureau at Washington reports that several million parents have failed to see to it that the birthdays of their babies—their own babies—have been registered in the family bible or any other place.

This is what we mean when we asked the question at the head of this article. Are you registered? We presume you are.

Almost every bright reader of The Pennsylvania Farmer can show a record of birth, but if one boy or girl does find that this important matter has been neglected, it will pay us well for publishing this article. We could tell many sad stories of money lost and even of reputations ruined thru such neglect.

A birth record proves a child's right to go to school as well as his right to leave school to go to work. It proves the individual's right to an inheritance. It furnishes proof that an individual is old enough to marry, to hold office, or that he is entitled to pass-ports for foreign travel under the protection of the American Flag. A birth record may even prove a women's right to a widow's pension.

Ask your parents to show you tonight where and how you are registered. It is certainly more important than how and where the calf is registered.—F. B. Swingle.

BELIEVES IN ROWING, NOT DRIFTING

"Wither Are We Drifting," and the answers have been very interesting to me, as I have a homemaker who formerly lived in town and said that she would rather be a dressmaker all of her life than a farmer's wife; but she is now happy and contented. I never ask her to be a man and feed hogs, milk, or chop wood—as a helpmate I prefer a woman.

We do not have all the modern conveniences, but we have found that life does not consist of dollars and cents, but there is greater pleasure in loving service than selfish ease, and if we follow in the path of duty, it leads to the thing we crave. Only those who have met difficulties in the road of life can stand at the top and enjoy the conqueror's view, which more than pays for the effort put forth to secure it. It takes more than modern conveniences or a fashionable wife to make one contented. If we are willing to live simple and natural, true love can find enjoyment even in the daily routine of the farm. —From one who believes in rowing, not drifting.

FARM PAPERS AGAIN

Replying to the "Pertinent Query" article in December 6th issue: Labor papers do not picture any elaborate buildings because as a class they have no buildings to picture. Almost any up-to-date farm barn building costs more than the city laborer's dwelling often only a 4 or 6 room flat with a 12 by 25 foot back yard—a nice view on a dusty dirty street. They can have a trip to the movies every night and Sunday which gets to be as monotonous and devoid of excitement as is the farmers trip to the barn at milking time.

Labor papers represent and desire to create a condition of unrest and dissatisfaction with everything in general. Farm papers are working and should work for a conservative and satisfied community and create a desire for better conditions, and to put the place in better shape for the children, even if we only make a living while we improve. Almost any poor farmer would make no more if he went to work in the cities.

E. M. A. may be essentially right as regards most of the reasons for the nice buildings being owned by the present owners but there would be more of them had the young folks taken hold where the old folks left off instead of seeking the glamour of the city, a life of supposed luxuries and ease. Judging from statements of leading manufacturers and business men the entire labor world wants something for nothing, according to statistics, when, labor production falls 60 percent below the 1917 average. Most city people would like the farm and would have one were they able to do so, and only ridicule the farm and farm life to cover up their inability and lack of back bone. Farm papers must work for a high ideal.—A. R. S., Tompkins Co., N. Y.

Many things—mice in particular—are more powerful dead than alive.

LIVE STOCK

THE FUTURE OF THE DRIVING HORSE

Undoubtedly the popularity of the automobile as a means of travel has had an important effect on the status of the horse. When the motor vehicle first became popular, there were misguided enthusiasts who predicted that the day would soon come when horses would be almost completely supplanted by their more speedy rivals, that the horse would be no longer necessary in the economic life of the world, and that therefore they would cease to be bred in large numbers because the demand for them would soon be a thing of the past.

We have seen motor vehicles in three classes, pleasure cars, trucks and tractors, brought to a state of perfection which can only be improved upon in trifling details, and the first two classes have been rapidly adopted thruout the world. The third class has passed the experimental stage and has found its true plane of usefulness, and also its limitations. It is a significant fact that the horse, as a means of heavy hauling, is just as popular and necessary on most farms as he was a generation ago. Even in cities, where the motor truck finds its large special field, horses will always be used in large numbers because of the special work which they alone can perform in an economical and dependable way.

The case is somewhat different with the light horse, weighing from 950 to 1,100 pounds, whose popularity depends on his style and speed as a roadster. Before the advent of the farm car, each farmer kept one or more driving horses. The farm driving horse was not the extremely stylish, speedy thoroughbred that the wealthy city man drove, but he bore the same relationship to the thoroughbred that the Ford does to the seven-passenger touring car. The farm driving horse was a very useful animal, which could travel long distances with considerable speed and endurance, and when occasion demanded an extra horse to work in the binder or plow, the driving horse could be depended on to do his share of the work.

For driving to church, to town, to picnics and for visiting the neighbors, the carefully groomed driving horse was the pride of the farmer and his family. Now all this has been changed. Even the farmer boy who a few years ago drove over to see his best girl in a shining new buggy, has now adopted the swifter, tho less dependable automobile. Farm autos in all grades from $400 up to $3,000 have to a large extent supplanted the good old favorite of former days. If the automobile enables the farmer and his family to visit among friends and neighbors, and thus bring more pleasure and happiness to farm life, it is entirely right. Farm folks should take advantage of all modern convenience which can add to the attractiveness of farm life. The only regretable feature incident to the popularity of the farm car is the consequent neglect of the horse as a means of travel.

Recently at a public sale we saw a spirited driving horse and a fine rubber tired buggy sold to the highest bidder because the owner had bought an automobile and therefore concluded that he had no further use for his horse and buggy, altho the auto was only a second hand Ford. This incident is only a repetition of that which has occurred on thousands of farms during the last five years. It is true that there are still men who admit that they derive more pleasure and enjoyment from driving a good horse and buggy than from an automobile, and many of these men are the owners of high-priced touring cars. It is doubtful whether the driving horse will ever regain the popularity which he has relinquished to the auto, but it is certain that there will always be men in the country and small towns who appreciate the fine qualities of the horse, and who will maintain a demand for good driving stock.

Neither Tractor Nor Truck Will Entirely Displace the Well Bred Horse

Altho some racing men fear that horse racing is on the decline, we can see no immediate scarcity of horses bred and trained primarily for racing. The development of the race horse is carried on as a contest in scientific and skilful breeding, and is thus independent of supply and demand, and less influenced by outside conditions, such as the popularity of the automobile.

The future of the driving horse is in the hands of each individual farmer and breeder in the land. In many localities only a very small percent of the farmers keep a driving horse, and this condition must be changed if the light horse ever regains his former position as a necessary part of the machinery for running the farm. If every farmer was a firm champion of the horse as a means of travel, there would be a steady demand for this class at a price which would make them a profitable line for farmers to raise. On most farms today the drivers are old horses which have belonged to the farm before the purchase of the farm car, and have been retained for the sake of old times, or because they were favorites of the women and children. When these horses are gone there are no younger ones to take their place. In many cases the expense of maintaining an automobile is so great that the farmer of moderate income cannot afford to maintain a good horse and buggy in addition to the car. This is most often seen in the case of those whose financial position does not justify the purchase of a car, and who try to equal their more wealthy neighbors. In such cases it is a deplorable fact that they have chosen the automobile in preference to the horse, as the former costs more, is more expensive for a farmer to maintain, depreciates faster and wears out quicker than the horse.

The automobile and motor truck have been a great factor in the development of improved roads. They also wear out roads to an extent unknown in the days of horse locomotion. Moreover, there are in most localities many miles of by-roads over which motor travel is difficult and expensive, and this condition will exist for many years in the case of roads which are seldom used. On this class of roads the horse is more useful and dependable than the motor car.

As a matter of style and good taste, a stylish buggy and well groomed driving horse are equal, if not superior to the majority of cars which have been used two or more years. The day is coming, if it is not already here, when the man who drives a handsome horse and buggy, or team and carriage, will attract more attention and envy than the owner of an automobile.

Those who appreciate the good qualities of the driving horse should lend their influence in every way which will increase their popularity. Now is the time for every friend of the horse to show his colors. Let him take a practical interest in driving horses, not only for his own use, but thruout the neighborhood. If it can be conveniently managed, let him raise a few of this type for sale. By so doing we can restore the light horse to his rightful place on every farm, and make him what he should be, one of the most useful and highly prized possessions on the farm.—John Marsh, Jefferson Co., Ohio.

A HUMANE WAY

Just outside the city limits of Auburn, N. Y., lives a man who has managed a slaughter house for years. Having occasion to visit that section two or three times a year, I have found that his way of killing the animals was a commendable one for various reasons, altho it was a different method than the one used in my own vicinity. He always shoots them in the brain before cutting their throats. He has only been shooting them for the last three years, but says he finds everything to recommend this way, and from the humane point of view it is certainly preferable to any other method. There is a great deal of thoughtless cruelty practiced in the slaughtering of animals.—E. M. L. B., N. Y.

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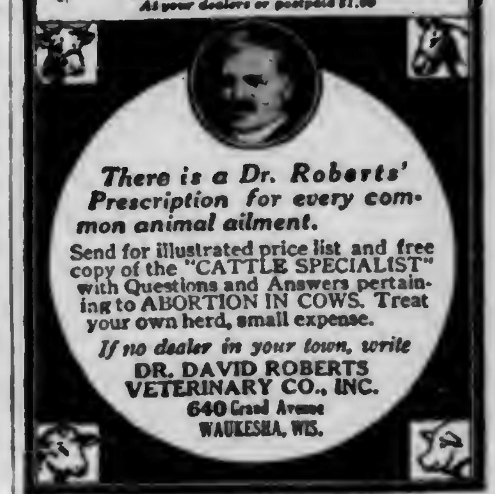

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KEZIAH COFFIN

By JOSEPH C. LINCOLN

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(Continued from Last Week.)

Grace heard her uncle's voice, speaking sharply and with unwonted sternness.

"I don't know what 'tis you want to see me about," said Captain Eben. "You say it's important; well, it's got to be to keep me from my meetin'. I ought to be on the Lord's business this minute and nothin' worldly's goin' to keep me from servin' Him. So speak quick. What is it?"

The voice that answered was one that Grace recognized, tho she had never before heard in it the note of agitation and undignified excitement. There were no ponderous pauses and "Hum—ha's" now.

"Don't be a fool, Hammond!" it said. "And don't stand there preaching. Lock that door! Get a lamp! Are you sure there's nobody but us in the house?"

Captain Elkanah Daniels! Captain Elkanah visiting a Come-Outer! and the leader of the Come-Outers! ! Grace caught her breath. What in the world—She started to descend and then a thought flashed to her mind. She stopped short.

"I ain't the fool, Elkanah," she heard her uncle retort sternly. "The fools are them who are deaf to the call from on high. My foot was on the threshold of His house when you led me astray. It's never halted there afore. I warn you—"

"Hush! Shut up! Can't you forget that—that Come-Outer circus of yours for a minute?"

"Elkanah Daniels, I'll have no blasphemy here. Another word like that and——"

"Will you be still and hear me? The Lord's business! I guess you'll think it's the Lord's business when you understand what I'm going to tell you! The Lord's business! The devil's business, you better say! Will you lock that door?"

"My church is waitin' for me and ——"

"Let it wait. What's a parcel of yelling Come-Outers compared to the decency of this town? Stop! Shut up! Eben Hammond, I tell you that your precious church—yes and mine, the Regular Church of Trumet—will go to rack and ruin if you and me don't pull together this night."

"And I tell you, Elkanah Daniels, I'll have no blasphemy here. That little sanctuary up the road is founded on a rock and neither you nor any of your Phariseein' priest-worshipin' crew can shake it. The Almighty'll protect His own. As for the Reg'lar church, that's no concern of mine."

"But I tell you 'tis your concern. Or if the church isnt, your own family is."

"My—my family?"

"Yes, your own family. Huh! that makes you listen, don't it?"

There was an instant of silence. Grace, crouching on the stairs, noticed the change in her uncle's voice as he answered.

"My own family?" he repeated slowly. "My own— And the Reg'lar church— What do you mean? Has Nat———"

"No, he ain't. But that cussed girl of yours——"

"Stop!" Eben's shout rang thru the house. The listener heard it, rose, and then sank slowly to her knees.

"'Stop!" shouted Captain Hammond. "Elkanah Daniels, for your own sake now, be careful. If you dast to say a word, another word like that, I'll——"

"If I dast! The hussy! But there's no use talkin' to you. You're as crazy as a Bedlamite. Either that, or you're in the game with her. If you are, I warn you——"

"Stop! What game? What do you mean? Gracie! My Grace! What is it? For mercy sakes, Elkanah———"

"Humph! I wondered if I couldn't get some sense into you, finally. Lock that door!"

"I will! I will! But Elkanah—"

"Lock it! Give me the key!"

The click of the lock sounded sharply.

"Where's the lamp?" demanded Daniels. "And the matches? Dont' stand there shaking."

A smell of sulphur floated out into the hall. Then the sickly glow of the "fluid" lamp shone thru the doorway.

"What ails you?" asked Elkanah. "Are you struck dumb? Now go and see if there's anybody else in the house."

"But—but there ain't. I know there ain't. Hannah's gone and Gracie's at meetin' by this time."

"She? Humph! Well, maybe she's at meeting and maybe she isn't. Maybe she's over in Peters's pines, hugging and kissing that man she's met there every Sunday for I don't know how long— Here! let go, you old fool! Let go, I tell you!"

A chair fell to the floor with a bang. There was the sound of hard breathing and rapid footsteps.

"Let go!" panted Daniels. "Are you crazy? Take your hands off me!"

"You liar!" snarled Captain Eben. "You low-lived liar! By the Almighty, Elkanah Daniels! I'll— You take that back or I'll choke the everlastin' soul out of you. I will— ——"

"Let go, you lunatic! You'll kill yourself. Listen! I'm not lying. It's the truth. She's met a man, I tell you. Been meeting him for months, I guess. There! now will you listen?"

The footsteps had ceased, but the heavy breathing continued.

"A man!" gasped Eben. "A man! Gracie! It's a— Who is he? What's his name?"

"His name's John Ellery, and he's minister of the Regular Church in this town; that's who he is! Here! hold up! Good Lord! are you dying? Hold up!"

The girl on the stairs sprang to her feet. Her head was reeling and she could scarcely stand, but she blindly began the descent. She must go to her uncle. She must. But Captain Daniels's voice caused her to halt once more.

"There there!" it said in a tone of relief. "That's better. Set still now. Be quiet, that's it. Shall I get some water?"

"No, no! let me be. Just let me be. I ain't what I used to be and this— I'm all right, I tell you. Grace! And—and— What was it you just said? I—I don't b'lieve I heard it right."

"I said that daughter of yours, or niece, or whatever she is, this Grace Van Horne, has been meeting young Ellery, our minister, in Peters's grove. Been meeting him and walking with him, and kissing him, and ——"

"It's a lie! It ain't so, Elkanah! Prove it or— It—it can't be so, can it? Please——"

"It is so. She's met him in those pines every Sunday afternoon for a long time. She was seen there with him this afternoon."

"Who—who saw her?"

"Never mind. The one that did'll never tell—unless it's necessary. They're fixing to be married, and— ——"

"Married! She marry a Reg'lar minister! Oh———"

"Hush! Listen! They ain't married yet. We can stop 'em, you and I, if we get right to work. It isn't too late. Will you help?"

"Will I—I— Go on! tell me more."

"We can stop 'em. I know it would be a good catch for her, the sneaking, designing— well, never mind. But it can't be. It shan't be. You've got to tell her so, Hammond. We folks of the Regular Church have pride in our society; we won't have it disgraced. And we have been proud of our minister, the young rattle-headed fool! We'll save him if we can. If we can't"—the speaker's teeth grated—"then we'll send him to eternal smash or die trying."

"But I can't believe it's true. It's a mistake; some other girl and not Gracie. Why, she don't even know him. She wouldn't—but she has been out every Sunday afternoon for weeks. If it should be!"

"It is. I tell you it is. Don't waste time rolling your eyes and talking stuff. We've got to work and you've got to work first. I don't know whether you're only making believe or not. I realize that 'twould be a good thing for your girl to marry a promising young chap like him, but —Hush! let me go on. I tell you, Hammond, it can't be. We won't let her. I won't let her. I'm a man of influence in this town, and outside of it, too. I'm head of the parish committee and a member of the National Regular Society. I can't reach your precious ward, maybe, but I can reach the fellow she's after, and if he marries her, I'll drive 'em both to the poorhouse.

"Here's where you come in Hammond. It may be she does really care for him. Or maybe she's after position and money. Well, you talk to her. You tell her that if she keeps on going with him, if she doesn't break off this damnable business now, tomorrow, I'll ruin John Ellery as sure as I'm a living man. He'll be ruined in Trumet, anyhow. He'll be thrown out by the parish committee. I'm not sure that his church people won't tar and feather him. Marrying a low-down Come-Outer hussy! As if there wa'n't decent girls of good families he might have had! But losing this church won't be the only thing that'll happen to him. The committee'll see that he doesn't get another one. I'll use my influence and have him thrown out of the Regular ministry. Think I can't? What sort of yarns do you suppose will be told about him and her, meeting the way they did? Won't the county papers print some fine tales? Won't the Boston ones enjoy such a scandal? I tell you, Eben Hammond, that young chap's name will be dragged so deep in the mud it'll never get clean again."

He stopped for breath. His companion was silent. After a moment, he continued:

"You tell her that, Hammond," he went on. "If she really cares for him, it'll be enough. She won't let him ruin his life. And I'll keep quiet till I hear from you. If she's sensible and really decent, then she can give him his clearance papers without his knowing why she did it and everything will be a secret and kept so. Nobody else'll ever know. If she won't do that, then you tell me and I'll have a session with him. If that's no good, then out he goes and she with him; and it's ruination for both of 'em, reputations and all. Why am I doing this? I'll tell you. I like him. He isn't orthodox enough to suit me, but I have liked him mighty well. And Annah—Humph! that's neither here nor there. What I'm fighting for is the Trumet Regular Church. That's my church and I'll have no dirty scandal with Come-Outers dragging it down. Now you understand. Will you tell her what I've said?"

The chair creaked. Evidently, Captain Eben was rising slowly to his feet.

"Well?" repeated Elkanah.

"Elkanah Daniels," said Eben slowly, his voice shaking from nervous exhaustion and weakness, but with a fine ring of determination in every word, "Elkanah Daniels, you listen to me. I've heard you thru. If your yarn is true, then my heart is broke, and I wish I might have died afore I heard it. But I didn't die and I have heard it. Now listen to me. I love that girl of mine better'n the whole wide world and yet I'd ruther see her dead afore me than married to a Reg'lar minister. Disgrace to him! Disgrace to your miser'ble church! What about the disgrace to mine? And the disgrace to her? Ruin to your minister! Ruin to my girl here and hereafter is what I'm thinkin' of; that and my people who worship God with me. I'll talk to Grace. I'll talk to her. But not of what'll happen to him or you—or any of your cantin', lip-servin' crew. I'll tell her to choose between him an me. And if she chooses him, I'll send her out of that door. I'll do my duty and read her out of my congregation. And I'll know she's gone to everlastin' hell, and that's worse'n the poorhouse. That's all tonight, Elkanah. Now you better go."

"Humph! Well, I declare! you are a bigoted———"

"Stop it I've kept my hands off you so fur, because I'm the Lord servant. But I'm fightin' hard to keep down my old salt-water temper. You go! There's the door."

"All right, all right! I don't care what you say, so long as it's said so as to stop her from getting him—and said soon."

"It'll be said tonight. Now go! My people are waitin' at the chapel."

"You're not going to that prayer meeting after this?"

"Where else should I go? 'Come unto Me all ye that labor and are heavy laden.' And—and"—his voice broke—"He knows that I am heavy laden. Lord! Lord! do help me, for this is more'n I can bear alone."

The lock turned; the door opened and closed. Grace, clinging to the balusters, heard Captain Hammond cross the room, slowly and feebly. She heard him enter the sitting room. Then she heard nothing more, not another sound, tho the minutes dragged on and on, endlessly, eternally, and each with a message, a sentence repeated over and over again in her

brain. "If she really cares for him, she won't let him ruin his life."

By and by, pale, but more composed, and with her mind made up, she came down into the hall. Drawing a long breath, she turned into the sitting room to face her uncle. By the light shining thru the dining-room door she saw him on his knees by the haircloth sofa. She spoke his name. He did not answer nor look up. Alarmed, she touched him on the shoulder. At her touch his arm slid from the couch and he fell gently over upon his side on the carpet.

CHAPTER XII.

In Which Captain Eben Makes Port

Half past eight. In the vestry of the Regular Church John Ellery was conducting his prayer meeting. The attendance was as large as usual. Three seats, however, were vacant, and along the settees people were wondering where Captain Elkanah Daniels and his daughter might be. They had not missed a service for many a day. And where was Keziah Coffin?

At the Come-Outer chapel the testifying and singing were in full blast. But Ezekiel Bassett was leading, for Captain Eben Hammond had not made his appearance. Neither had Grace Van Horne, for that matter, but Captain Eben's absence was the most astonishing.

"Somethin's the matter," whispered Josiah Badger to his right-hand neighbor. "Somethin's wrong d-d-d-down to the tavern, sartin' sure. I'm goin' down there just soon's meetin's over and f-f-f-find out. Eben wouldn't no more miss leadin' his meetin' from choice than I'd go without a meal's v-v-vi-vittles. Somethin's happened and I'm goin' to know what 'tis. You'll go along with me, won't ye, Lot?"

The answer was an affirmative. In fact, almost every worshiper in that chapel had determined to visit the Hammond tavern as soon as the service was at end end.

In the Regular parsonage Keziah sat alone by the sitting-room table. Prayer meeting and supper she had forgotten entirely. The minister had not come home for his evening meal, and food was furthest from the housekeeper's thoughts. What should she do? What ought she to do? How could she avert the disaster so certain to overwhelm those two young people the moment their secret became known?

It was in vain that she tried to encourage herself with the hope that Kyan had exaggerated—that the meetings in the grove had not been as frequent as he said they were, or that they had been merely casual. She knew better. She had seen the pair together and done, they loved each other; or, at least, he loved her. There was the great trouble.

Keziah, in spite of her worldly common sense, was an idealist at heart. Love matches she believed in thoroly. If the man had not been a Regular minister, or if he had been a minister in any other town than narrow, gossiping, squabbling Trumet, where families were divided on "religious" grounds, neighbors did not speak because their creeds were different, and even after death were buried in cemeteries three miles apart; if the girl had been other than the ward of bigoted Eben Hammond—then, tho they were poor as poverty itself, Keziah would have joined their hands and rejoiced. Even as it was, she was strongly tempted to do it. Her sense of right and her every inclination urged her toward that course. "Face the world together and fight it out," that was the advice she would like to give them. But no, the battle was too uneven. The odds were too great. They must not think of marriage, for the present, and they must cease to meet. Perhaps some day—she tried to comfort herself with the thought—perhaps some day, years afterwards and under different circumstances, they might———

With Ellery she felt certain she could accomplish nothing by argument or persuasion. She knew him well enough by this time to realize that, if his mind was made up, all Trumet and all creation could not change it. He would keep on his course, and, if wrecked, would go down with colors set and helm lashed. But Grace, perhaps she did not fully realize the situation. Se might be made to see, to listen to reason. And, perhaps, it was possible—perhaps, on her part, matters were not as serious. The minister had not acted like a triumphant lover, assured of success; he had seemed, now that she thought of it, more like a pleader, a supplicant. Perhaps, if she could see Grace and talk plainly with the girl, it might not be too late. She determined to try that very night.

HUNGER KNOWS NO ARMISTICE

It is well for us in America to remember, during our holiday feasting, the hunger and misery of the people in the war-torn countries of Europe. In Armenia alone, 800,000 will starve unless food is provided until next year's harvest. The Near East Relief, 1 Madison Ave., New York, is the only organization giving relief to these suffering people and lack of funds limits them. The above picture showing the horrible condition was painted by M. Leon Bracker.

She rose and again donned her bonnet and shawl. She was about to blow out the lamp when she heard rapid footsteps, the sound of some one running along the sidewalk in front of the house. As she listened, the footsteps sounded on the path. Whoever the runner was he was coming to the parsonage. She stepped to the door and opened it.

The runner was a boy, Maria Higgins's boy Isaac, whose widowed mother lived down by the shore. He did the chores at the Hammond tavern. His freckled face was dripping with perspiration and he puffed and blew like a stranded whale.

"What's the matter, Ike?" demanded Keziah. "What is it?"

"Have ye—have ye," panted Ike, "have ye seen the doctor anywheres, Miss Coffin?"

"Who? Dr. Parker? Have I seen —what in the world are you comin' here after the doctor for?"

"'Cause—'cause I didn't know where else to come. I been to his house and he ain't to home. Nobody ain't to home. His wife, Mis Parker, she's gone up to Boston yes'day on the coach, and—and it's all dark and the house door's open and the shay's gone, so——"

"Who's sick? Who wants him?"

"And—and—all the rest of the houses round here was shut up 'cause everybody's to meetin'. I peeked in at the meetin' house and he ain't there, and I see your light and—"

"Who's sick? Tell me that, won't you?"

"Cap'n Eben. He's awful sick. I cal'late he's goin' to die, and Gracie, she——"

"Cap'n Eben? Eben Hammond! Dyin'? What are you talkin' about?"

"Huh! huh!" puffed the messenger impatiently. "Didn't I tell ye? Cap'n Eben's adyin'. I see him. All white and still and— and awful. And Gracie' she's all alone and—"

"Alone? Where's Nat?"

"She don't know. He ain't to home. But I got to find Dr. Parker."

"Hold on! Stop! I'll tell you where the doctor is most likely. Up to Mrs. Prince's. She's been poorly and he's prob'ly been called there. Run! run fast as ever you can and get him and I'll go to Grace this minute. The poor thing! Have you told anybody else?"

"No, no! ain't seen nobody but you to tell. They was prayin' over to meetin', and the fellers that waits outside to keep comp'my with the girls ain't got there yet. And I never met nobody. And 'twas so blasted dark I fell down four times and tore my best pants and——"

"S-sh-sh! Listen to me! Don't tell anybody. Not a soul but the doctor. Half this town'll be runnin' to find out if you do, and that poor girl must be distracted already. I'll go to her. You get Dr. Parker, and tell him to hurry."

"I'll tell him: don't you fret."

He was gone, running harder than ever. A moment later Keziah followed him, running also.

It was a misty, black night, and Trumet sidewalks were uneven and hard to navigate. But she stumbled on, up the main road to the Corners, down the "Turn-off," past the chapel to the Come-Outers, from the open window of which sounded the drone of a high, nasal voice. Josiah Badger was "testifying," and Keziah caught a fragment of the testimony as she hurried by.

Then a rocking chaise, drawn by a galloping horse, shot by. Dr. Parker's carriage, she was sure. The Higgins boy must have met the doctor and delivered his message.

The horse and chaise were standing by the front of the tavern as she pantingly drew near it. The side door of the house was ajar and she opened is softly and entered. The dining room was empty. There was a light on the sitting-room table and low voices came from the little bedroom adjoining. Then, from the bedroom, emerged Dr. Parker and Grace Van Horne. The girl was white and there were dark circles under her eyes. The doctor was very grave.

Keziah stepped forward and held out both hands. Grace looked, recognized her, and with a cry ran toward her. Keziah took her in her arms and soothed her as if she were a child.

"There! there! deary," she said, stroking her hair. "There! there! deary, don't take it so hard. Poor thing! you're worn out. If I'd only known sooner."

"O Aunt Keziah!" sobbed the girl. "I'm so glad you've come. It was so good of you."

"Good! Land of mercy! If I hadn't come, I'd have been worse than the beasts that perish. Don't cry, don't. How is he now? Some better?"

She looked at the doctor as she asked it. He shook his head emphatically.

"Well, well, dear," went on Mrs. Coffin hurriedly. "He will be pretty soon, we'll hope. You mustn't give up the ship, you know. Now you go and lay down somewheres and I'll get my things off and see what there is to do. Some good strong tea might be good for all hands. I guess likely. Where's Hannah Poundberry?"

"She's gone to her cousin's to stay all night. I suppose I ought to send for her, but I——"

"No, no, you hadn't. Might's well send for a poll parrot, the critter would be just as much good and talk less. I'll look out for things, me and the doctor. Where's Nat?"

Keziah looked longingly toward the door.

(Continued Next Week.)

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Most boys like to trap. Some like it better than hunting, and the returns in profits usually are greater than from ordinary hunting.

The reason for this is easily seen in the enormous prices paid for furs during the last few years. When your fathers were boys, fifty cents was a good price for an ordinary mink, weasel or skunk pelt. Now, it is not unusual to hear of six or eight dollars being paid for one of these. So there is good reason for a new interest in trapping among the boys today. We even know of some girls who add to their spending money by running a line of traps.

One of the best places for any furbearer is along an old fence. If this extends from one cluster of woods to another it is pretty sure to be used as a protection when the animals travel. No wild animal likes to get too far away from a hiding place, and the shelter of a stone wall, a rail fence, an old stump fence, pole fence, or any other fence that gives a slight shelter makes a good place to put a set.

Grey Foxes

Often signs of digging, claw marks, or other signs will give evidence that fur bearing animals are traveling along a fence. The fence gives protection to your trap and shields it from snow.

A good place to set a trap, will be found in a hollow stump, log or stub. A little bait placed in a hollow log, or hung in a hollow tree will help to attract the animal. A scent bait of strong meat hung near by also will help to draw animals to that locality.

Skunks are most easily trapped at the entrance of their burrows. Mink, coon and many others fur bearers follow tile drains and drainage ditches, in a way that allows them to be easily trapped, along such runways. Foxes are becoming scarce but there are still thousands of them trapped each year.

In the trapping business you not only have the excitement and the pleasure of using the money earned, but at the same time are ridding the poultry yards of many enemies.

Just one point we would like to bring out here: Visit your line of traps often, by so doing you will avoid losing valuable catches and at the same time be merciful. Animals caught in steel jaws will suffer, of course, and while we may have small sympathy for the robber of our hen roost, we should not allow him to suffer unnecessarily.

Be careful to prepare your pelts in the best possible manner for shipment. If the skin is taken off cased, that is, without being slit open, it should be stretched on a board or a shingle, made to fit it, or else on a steel frame, such as those sold by dealers in trappers' supplies. The open pelt skins may be stretched out on a board, or the side of a building.

Mink pelts take a stretcher about eight inches wide and twenty-eight inches long. Muckrats take a stretcher wider but not so long. For skunks the stretcher should be about eleven by thirty inches.

Most pelts should be packed and shipped, with the skin side out. Those that may be shipped with the fur side out are fox, wolf, wild-cat and martin. If you want to know why ask your fur dealer. Tie them with strong cord, put a tag on this cord, then put the bundle of furs into a burlap sack and tie again. Do not wrap your pelts in paper.

We will have more to tell you about trapping, in another article, but will close this time with a recipe for tanning pelts:

Mix two parts saltpeter and one of alum, sprinkle on the flesh side of the skin; roll it up and leave for a few days in a cool place, then spread it out to dry. Scrape off the fat and rub until pliable.—F. B. Swingle.

CARBON COUNTY, PA. (E) PRICES AND PROSPECTS

The weather of late has been cold and stormy at times with a great deal of rain, and only several inches of snow so far this season. Farmers have been hauling cinders on the roads. They make a good road for several years where there is a stone foundation. They are paid $6 per day for team and driver. Prices are as follows: Hay, loose, $36 per ton; oats, 95c per bu.; rye, $1.45 per bu.; wheat, $2.26; corn, $2; eggs, fresh, $1.10 per dozen; butter, 75c pound. Prices paid by farmers: Best Dairy Feed, $3.90 per hundred; flour, $7.50 per hundred; sugar not to be had at all. Milk is 9c per quart at the farm. It retails at 14 cents. Corn was a good crop and is all harvested. Potatoes all sold and prices rising. Some dairy animals bought at high prices. Farmers not enthusiastic over demands by labor for more pay and shorter hours. Outlook for farmers good if good prices continue for their products.—Walter S. Bittner.

A Woodchuck

GERMOZONE The Best Pet Stock Remedy

For Poultry, Pigeons, Dogs, Cats, Rabbits, Parrots, Canary and other birds or pet animals, Germozone is a universal and safe remedy: for colds, snuffles, roup, sore throat, loss of voice or singing, influenza, bowel trouble, distemper, sore eyes or ears, canker, gleet, loss of fur or feathers, sores, wounds, skin disease,—or other affections of skin or mucous membrane.

"My hens have never done so well as this year and haven't lost a single chick"—Mrs. Flora Kepple, Walker, Ia. "Simply grand for rabbits"—L. W. Browning, Boone, Ia. "Cannot praise Germozone enough. I use it for chickens, stock and household"—Mrs. Wm. Hoeppel, Hugo, Okla. "My bird puppies don't know what distemper is and I never had such good success before with chicks"—Curly Smith, Kennett, Mo.

Germozone is sold by most drug, seed and poultry supply dealers, or mailed postpaid in 25c, 75c and $1.50 packages from Omaha. Book on treatment of diseases free with each package.

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Poultry

LOOK BABY CHICKS $17 A 100 UP
By Special Delivery Parcel Post, postpaid 20 different thorobred breeds. Utility & Exhibition grades. Live delivery guarenteed. Capacity 100,000 weekly. Catalog free. Nabob Hatcheries, Gambier, Ohio.

Baby Chix: Imported Heavy Laying Barron 300 egg strain S. C. White Leghorn Baby Chix. Heavy, deep-bodied, red-combed birds, with the lay bred into them. 22 cents each; $20 hundred, parcel post delivered. Book your order now for Spring Delivery.
LEONARD STRICKLER, SHERIDAN, PA.

Tiffany's Superior Chicks That live. Silver, White, and Columbian Wyandottes, Buff, Barred, and White Rocks. R. I. Reds, White and Brown Leghorns. Pekin, Rouen, and Indian Runner Ducklings (heavy type). Aldham Poultry Farm, R. 30, Phoenixville, Pa.

Selby Service Satisfies Ship us your produce, poultry and eggs. Penna. Potatoes a specialty. Returns day goods are sold. Ask for our market letter.
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Eggs $1 Setting Parcel Post paid. Purebred. Barred, White and Buff Rocks; White and Brown Leghorns; Reds, White Wyandottes, Buff Minorcas; Black Langshans; Buff Orpingtons. Philip Condon, Box 119, West Chester, O.

S. C. Rhode Island Red and Golden Campine Cockerels. Early hatched $2.50 each. Satisfaction guaranteed.
I. R. TANGER, YORK SPRINGS, PA.

LIGHT BRAHMA COCKERELS (WOOD STRAIN). Also Barred Plymouth Rocks (Cockerel mating). A few pullets. Eggs and day-old chicks. GLEN DALE POULTRY FARM, DILLSBURG, PA., R. 2.

Bronze, Narragansett, Bourbon Red, Black and White Holland breeding turkeys from the finest flocks in America. Write for special prices to close them out. F. A. CLARK, Xenia, Ohio, R. 5.

Barred Plymouth Rocks (Pullet line) Buttercups and Ancona Cockerels. Also limited supply of pullets. Prices reas. J. K. Cadwallader, Wellsville, Pa. R. 1.

S. C. White Leghorn Baby Chicks for 1920 delivery. Tom Barron strain. Order early. C. P. Shirey, Stewartstown, Pa.

WHITE LEGHORN LAYING PULLETS, YEARLINGS. Best strains, excellent stock, heavy layers.
FOREST FARM, ROCKAWAY, N. J.

Barred Rock COCKERELS good strains, $3.00 to $4.00 each. J. I. HERETER, Gettysburg, Pa., R. 4.

200,000 Chicks—for 1920. Now is the time to place your order, prices reasonable. Sat. and safe delivery guar. Cata. free. Keystone Hatchery, Richfield, Pa.

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Chester Whites. Spring boars, bred gilts, and trios from some of the best blood lines. Immuned. Also good fall pigs. C. J. Stough & Sons, R 1, Findlay, O.

BERKSHIRES Superior, Epocal, Rival Champion Blood. Pigs $15 and up. G. D. BARNES, R. D. 11, Grove City, Pa.

REG. O. I. C.'S ALL AGES. Booking orders for September, October and November Pigs. BLACK DIAMOND MINORCA FARM, MT. BETHEL, PA.

BERKSHIRES AND CHESTER WHITES All ages, for sale; write your wants; we can please you.
TWIN BROOK FARM, NEWVILLE, PA.

BIG TYPE POLAND CHINA PIGS 3 months old. Sired by Longfellow 107751. W. C. KEYSOR, GREENWICH, OHIO.

Large Berkshire Swine Registered High Grade. Prices reasonable. Write
HOME FARM, CENTER VALLEY, PA.

Berkshire Bargain. Three year old Shenandoah "O" Delchester Prince 4th and 2 bred sows $200. All reg. L. C. TOMKINS, ELLENTON, PA.

Durocs, all im. Yearling and Fall yearling boar and Fall boars. Fall gilts, bred for Aug., Sept. and Oct. Spring pigs, e. sex. I. D. Jackson, R. 10, V. Wert, O.

CHESHIRES.—The high-quality home-market and home-table breed. Our type pleases. Pigs and service boars. Morningside Farm, Sylvania, Pa.

Reg. O. I. C. and C. W. Pigs, Bred gilts and sows Satisfaction and safe delivery guaranteed.
JOHN L. VAN HORN, TROY, PA.

DUROC JERSEY MARCH SERVICE BOARS. July pigs, Colonial and Orion Cherry King breeding. Prices right. GEO. W. TRIM, Uhrichsville, Ohio.

O. I. C. Males 2 and 3 months old. Big, smooth kind. Reg. free.
BRUBAKER BROS., Star R, Cocolamus, Pa.

Reg. Poland Chinas Choice Spring gilts and boars. Aug. and Sept. pigs shipped on approval. R. H. LYLE, Cadiz, Ohio.

Chester Whites Boar and Sow Pigs. Bred Sows. Collie dogs.
ARCADIA FARM, BOX D, BALLY, PA.

Reg. O. I. C. Pigs for sale, 3 months old, either sex. Write your wants. A. J. Marshall, Oakland Farm, Williamsport, Pa. R.1

Large Berkshires Registered. May farrow, also October pigs. Both sexes. Prices reasonable. C. H. TOLAND, FREEPORT, OHIO.

For Sale—1 Reg. O. I. C. Boar, 18 mos. old. 1 Reg. O. I. C. Sow, 2 yrs. old, with pig. 1 Grade Sow, 3 yrs. old, with pig. B. A. Corkran, Midlothian, Va.

Facts in BLACK & WHITE

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First Prizes and Gold Medals were awarded to Guernsey milk and Guernsey cream at the 1919 National Dairy Show. Guernsey products are consistent winners at local as well as national contests. Write for our free booklets.

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Few choice bull calves—A couple fine young cows, priced very reasonable to effect ready sale. Bull calves from fine A. R. cows, or cows now on test for Advanced Registry. Excellent opportunity to found a herd of high class Ayrshires. Your inquiries and visit to the farm will repay you.
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MINERAL HEAVE COMPOUND In use over 50 years

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$2.25 Box guaranteed to give satisfaction or money back. $1.10 Box Sufficient for ordinary cases. (Includes War Tax.)
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Miscellaneous

HAY AND POTATOES
Poultry and all produce wanted at market prices. Good, steady, active demand. GIBBS & BRO., 325 N. FRONT STREET, PHILADELPHIA, PA.

PENNS VALLEY STOCK FARM
Percherons, Berkshires, Holsteins
"Young Service Boars, pigs either sex."
W. F. RISHEL, CENTRE HALL, PA.

NEAR-BY STOCK FARM offers Reg. Ayrshire cattle, Reg. Berkshire pigs 3 to 5 months, a few bred sows. Best of breeding. White Wyandottes.
J. A. McMAHAN, POTTSGROVE, PA.

30 WEANLING PONY COLTS, Shetland and larger sizes, in spotted and solid colors. 75 older ponies, 300 to 750 lbs., broken to ride and drive. Price list for stamp. SHENANGO PONY FARMS, Espyville, Pa.

For Sale 1 Shropshire and 1 Yearling Rambouillete ram. Also large ram lambs, both breeds. 6 growthy O. I. C. sows, April and May farrow. Stock reg. H. C. Beardsley, Montour Falls, N.Y.

REG. P. CHINAS, BERKSHIRES, C. WHITES, large strains, all ages, mated, not akin; 8-wk. pigs, br. sows, service boars. Beagles and Collies. Write for circ. P. F. HAMILTON, COCHRANVILLE, PA.

WANTED Nuts (all kinds), calves, poultry, fancy eggs and Hot House lambs.
WM. H. COHEN & CO.,
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FOR SALE—O. I. C. PIGS. ALSO RABBITS. Pigeons, Owls, and Plymrocks. Write for prices.
FRANCIS SCHEIB, GRATZ, PA.

Chester White Hogs, All Ages
Shorthorn Bulls. R. L. MUNCE, Canonsburg, Pa.

Cattle For Sale, 2 loads feeders and 2 loads yearling steers. Also any number 1, 2 and 3 yr.-olds from 600 to 1000 lbs. Isaac Shanstrom, Fairfield, Iowa, R-8.

PURE BRED Brown Swiss Bulls, also one pair young Jennetts. Come and see the goods. C. Eugene Bown, Forksville, Pa.

HAY Ship To The Old Reliable House Daniel McCaffrey's Sons 623-625 Wabash Bldg., Pittsburgh, Pa.

Please discontinue my ad in Pennsylvania Farmer as I am entirely out of Bronze Turkeys. The little ad certainly did wonders for me.
WALTER H. EBAUGH, Stewartstown, Pa.,

Veterinary

Conducted by W. C. Fair, V. S.

Advice thru this department is free to our subscribers. Each communication should state history and symptoms of the case in full; also the name and address of writer. Initials only will be published. We cannot make reply by mail. This is one of the most valuable columns of the paper and we invite readers to make use of it. Clippings from this column, when properly preserved and classified, make one of the most valuable medical symposiums a farmer-stockman can obtain.

Weakness; Partial Loss of Power.—Lameness.—I have a cow due to come fresh in 3 weeks, that is showing weakness in one hip. When she came fresh last year she was down for several days, unable to get up. She is a good cow and I would like to save her. I also have steer that is lame in hind foot, yellow pus runs from top of hoof. Steer seems to be healthy.—D. B. B., Lebanon, Pa. Dissolve one dram permanganate of potash in one quart of water and apply to foot 2 or 3 times a day. The first mentioned cow should be well fed and apply equal parts turpentine, aqua ammonia and raw linseed oil to back daily.

Cow Sucks Herself.—When ever my cow runs out she sucks herself. —R. A. L. Arrange her stall so that she cannot reach udder with nose, and stabble her. A mechanical appliance that she is forced to wear is the only remedy, if she runs out to pasture. Stable her in stall regulation width in rear, but narrow in front, then she will be unable to get her body in proper position for her to suck herself.

Leucorrhea.—We have a mare that has what is commonly called "Whites" and would like to know what to do for her. F. F. C., Coudersport, Pa. You will find it no easy task to cure this chronic discharge as it is doubtless the result of a continued, subacute inflammation of the mucus membrane of the womb. Like the discharge of acute inflammation, it contains many forms of bacteria. Give her one dram of dried powdered sulphate of iron at a dose in feed 3 times a day. Dissolve ½ dram tannic acid and 2 drams carbolic acid in one part of clean water and wash out vagina once daily. You had better use fountain syringe and not less than 1 quart each application. She should be well fed and not overworked.

Indigestion.—One of our work horses is thin, his coat is rough, coat full of dandruff and he is not thriving. He eats fairly well, but don't seem to pick up and lay on flesh. Have examined the excrement which passes his bowels but fail to see any worms. A. F. S., Meadville, Pa.—First of all you should notice that his grinder teeth are in good condition, they may require floating. Mix equal parts powdered sulphate of iron, ginger, gentian, salt and powdered wood charcoal. Give him a tablespoonful at dose in ground feed 3 times a day, by changing his feed you will soon observe either good or bad effect from it. Feed him the kind of food which fais to produce bloating. Exercise him daily, keep his bowels active. Groom him well, twice a day.

Garget.—One of our cows has caked udder. She came fresh some two months ago some two weeks later her bag commenced to cake. I applied hot water then rubbed on turpentine and lard, but it could not have done much good, for she got no better. W. H. D., Grimville, Pa.—Fairly good results will follow applications of one part iodine and 15 parts fresh lard, not forgetting the benefit from gentle hand rubbing of the caked portion of udder once or twice a day. The iodine ointment should be applied every day or two.

Eczema.—I have a fine ewe that last year lost about half of her fleece before shearing time. I suspected she might be suffering from some parasitic trouble. What had I better do for her? J. B. O., Greencastle, Pa.—Give her 3 grains potassium iodide at dose in feed or drinking water twice a day. Apply one part cold-tar disinfectant and forty parts water once a day to itchy and bald parts of body. Feed her some roots during the winter and avoid keeping her in too warm a place. If her skin is dry and harsh, apply one part kerosine and 14 parts petrolatum.

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The House that Divides the Melon with its Farmer Friends

See this great book of finest quality Agricultural Implements. If there ever was a time to stretch your dollars and take advantage of Galloway's Direct-to-you saving by "Dividing-the-melon," this is the time. It means that when you buy from Galloway you get "half the melon" in actual savings on Galloway goods—20 to 35 cents less on every dollar—because they come right off the factory floor straight to you.

So I say: Buy Direct from Factory
Save on Separators, Engines, Spreaders

Every Galloway Implement is guaranteed to satisfy or your money comes back. You can have 30, 60 and 90 days' trial. Choice of five easy buying plans. Get this 1920 Book now.

Separators Thousands of users say it's the best ever. Is simple, strong and absolutely sanitary. Skims close. Easy to run and clean. All working parts run in oil spray. Every drop of milk gets full skimming force of the bowl. 90 days' working trial on your farm will prove everything I say is so. Compare the Galloway—see how it outskims all others.

Engines New 1920 models for any farm power work, portable or stationary style. Develop way above rated horsepower. Big bore, long stroke. Valves in head like automobile engine. Extra heavy counterbalanced fly wheels. Every part standardized and interchangeable. Frostproof—works winter or summer.

FOUR GOOD SIZES 375 lbs. — 600 lbs. 750 lbs. — 950 lbs.

The Masterpiece Seven and five other sizes for any farm work

Spreaders The new No. 8 is low down, easy to load, with unsurpassed roller feed, insuring light draft—all-steel V-rake—extra strong beater teeth that tear manure to shreds—automatic stop—uniform clean-cut pushboard—spreads from 4 to 24 loads per acre. Two horses pull load easier than 3 or 4 horses can handle old style spreader. My new No. 8 Low Down Model will pay for itself in increased crops. Turns the soil into a gold mine.

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WRITE NOW. Don't hesitate. I urge you to get my new 1920 Book. See how you can pay only one price for your implements and get the best made. We ship promptly from points near you and save you on freight. Send Coupon Now.

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Wm. Galloway Co.
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Dairy

MAPLE LAWN HOLSTEINS

BEST in High grades and Registered Holsteins. Elegant high grade calves $25 each. With ten calves will give choice registered bull free. Will accept Liberty Bonds and W. S. S. at par. Guarantee safe arrival and gladly ship C. O. D. Write your wants. C. W. ELLIS, JR., Cortland, N. Y.

HOLSTEINS

that test 4% OF FAT FOR THE YEAR'S MILK PRODUCTION. Grandsons of the ONLY COW of ANY BREED—ANYWHERE—that ever made two consecutive yearly records under full age that average over 24,000 lbs. of 4% milk, 1200 lbs. of butter each year—one year strictly official. Three months bull calves $100 and up; service bulls $150 and up. GEO. E. STEVENSON & SONS, CLARKS SUMMIT, PA.

WE WILL GIVE THE USE OF A
Finely Bred Reg. Holstein Bull Calf
for three years to any responsible farmer who wishes to improve his herd. Nugget Hill Farm, Charlton, Mass.

HIGH GRADE HOLSTEIN CALVES. Either sex. Shipped anywhere. Write for prices. Satisfaction and safe delivery guaranteed. FRANK GAMEL, PINE GROVE FARM, LOCKE, N. Y.

Holstein Heifer Calves By pure bred sire and high-grade big producing cows. Beautifully marked. Splendid individuals, $20 up. Browncroft Farms, McGraw, N. Y.

For Sale—Reg. Guernsey bulls, out of a good dam, a grandson of Langwater Royal. Reasonable. HAYES C. TAYLOR, EMBREEVILLE, PA.

FOR SALE: 3 CHOICE REG. GUERNSEY BULL Calves, 6 months old, May Rose breeding. Dams now on test. $75 each. Riverview Farms, Swarthmore, Pa.

Registered Holstein and Guernsey bulls from calves to serviceable age. 250 animals in the herd. BONNYMEADS FARMS, R. D. 1, Harrisburg, Pa.

Milking Shorthorns Bull Calves sired by Glenside Royal Stamp for sale. C. M. KENNEDY & SONS, Ulster, Bradford Co., Pa.

SPOT FARM

REGISTERED HOLSTEINS 40 heifer calves, 2 to 10 mos. old, $90 to $125 each or the lot for $100 each. 28 granddaughters of King of Pontiacs, 2 to 3 yrs. old bred. 15 other reg. heifers. 20 reg. bulls, 2 to 18 mos. old. Reg. cows, high grade cows and 100 high-grade 2-yr.-old heifers due to freshen this winter. ¾ Holstein heifer calves. Also 27 lb. son of King of Pontiacs.
J. C. Reagan, Tully, N. Y.

STEVENS' HOLSTEIN FARM
OF CORTLAND, N. Y.
King Korndyke Sadie Vale Jr., No. 20391, two nearest dams averaging 36 pounds of butter in 7 days, heads my herd. Butter records from 17 pounds two-year-olds to 34 pounds at full age. Also high grade Holstein calves, either sex, $15.00 each. Write your wants. PAUL H. STEVENS, Prop.

Holstein Bulls Ready For Service
Two are coming two years old, one three years. Better see these bulls; see the size and milking ability of dams and the remarkable calves the older one is getting. They have been raised under ideal conditions and are priced right. PLUMLYN FARM, Fairview Village (near Norristown), Pa.

Oakhurst Farm Ayrshires present offering—20 young cows of the choicest strains, bred to freshen this winter and spring in calf to a high-class bull.
GUY D. POWER & SON, Auburn, N. Y.

Holstein Reg. Bull, 17 months old, from a good 30 lb. bull, dam a good producing cow. Weight 625 lbs.; sure server; dark-colored; good individual. Only $75. THE OAKS DAIRY FARM, Wyalusing, Pa.

Registered Holstein Friesian Cattle Sons of the great Finderne Sir Valdessa, a 37 lb. bull, for sale.
MILLARD E. BASEHOAR, Littlestown, Pa.

Holstein Bull Calves $25 each, 5 days old, unregistered. $30 each with paper. High producing reg. dams and sires. L. C. TOMKINS, ELLENTON, PA.

Ayrshire Bull Calves From high record A. R. Dams
ROBERT TEMPLETON & SON, ULSTER, PA.

Reg. Holstein Heifer Calves, from officially tested dams and a 30 lb. sire. Write for prices, pictures and peds. Walter M. Cruttenden, Wilkes-Barre, Pa.

BRADFORD COUNTY, PA. "A LAND OF GOOD LIVESTOCK"

Offers you an unusual opportunity to secure registered Jersey, Holstein, Guernsey, Ayrshire, and Milking Shorthorn cattle of high quality at reasonable prices. Your inspection is solicited. Address all inquiries to
D. K. SLOAN, Secretary, BRADFORD COUNTY LIVESTOCK BREEDERS' ASS'N.
Office with County Farm Bureau, Towanda, Pa.

NEW JERSEY ALFALFA ASSOCIATION

Arrangements have been completed for the annual meeting of the New Jersey State Alfalfa Growers' Association to be held in Trenton during "Agricultural Week" on Friday, January 16. Farmers of New Jersey, particularly dairymen, are coming more and more to realize the value of this important hay crop. The State Alfalfa Association has done much to develop the crop in the state. It has found that irrigated northern grown seed now gives best results and has secured good seed from known sources for its members. The work of the Association will be fully discussed at the meeting by President George T. Reid of Mount Holly and Secretary Frank App of the State College of Agriculture. "Methods of Seeding Alfalfa and Crops Following Alfalfa in Rotation" is the subject of an address by Prof. Nicholas Schmitz of the State College of Pennsylvania. This will be followed by a thoro discussion by men from different parts of the state who have had experience with the crop.

The curing of alfalfa is a question of interest to every grower. This will be covered in a practical way by H. W. Jeffers, president of the Walker-Gordon Farms, Plainsboro, and Walter E. Minch, president, Minch Bros. Farms, Bridgeton. Both of these men are well known to Jersey farmers and both have had long experience with alfalfa. The largest acreage in the state is grown on the Walker-Gordon Farms where thousands of tons are harvested annually.

In addition growers will hear at the meeting what is being done thruout the state, as a roll call by counties has been planned. Comments on the corn show will be made by the Judge. Professor Schmitz, and Doctor App, will discuss "Five Years Progress in Corn Growing in New Jersey."

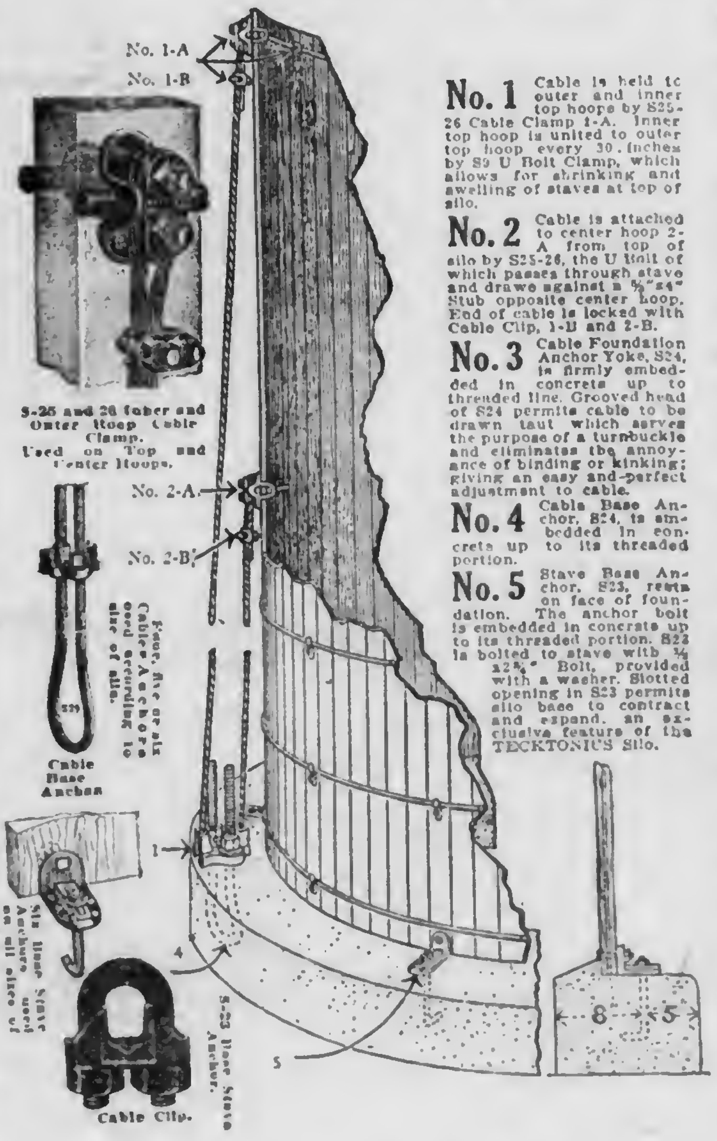
COUNTY NOTES

Adams, Ohio, (SC), Dec. 15, 1919.—Real winter weather with ground covered with ice and snow. Temperature at 6 degrees above zero this morning. Live stock not in as good condition for winter as usual. Most farmers have been feeding all their stock since November 20. Much corn out in shock and is damaged because of so much wet weather. The shredding of corn has been very slow because of excessive moisture. Public schools are well attended.—Walter E. Roberts.

Mifflin Co., Mattawana, Pa., Dec. 15.—Weather since last writing mostly warm and very rainy, poor for husking corn, no drying weather. Likely some corn will spoil in the crib; some thrashing to do yet on account of the rain. Much butchering has been done in spite of the warm and wet weather. Saturday, the 13th it rained all day, that night it snowed about two inches, 14th blew up cold, this morning was 14 above zero with a strong wind and a few snow squalls. Prices: dressed pork, 16c; beef, 17 and 18; chickens, 35c; butter, 60c; eggs, 70c, and very scarce; corn, $1.50, and hard to get from the farmers; oats, 80c and scarce; rye, $1.50; wheat, $2.25; apples, $1.60; potatoes, $1. General work is butchering and getting in the year's supply of fire wood. Dec. 16, 6 A. M., ten above zero.—J. H. Byler.

Every rat costs the farmer at least two dollars per year to board.

THE TECKTONIUS AND DARBY SILOS


No. 1-A
No. 1-B
S-25 and 26 Inner and Outer Hoop Cable Clamp. Used on Top and Center Hoops.
No. 2-A
No. 2-B
Four, five or six Cable Anchors used according to size of silo.
Cable Base Anchor
Six Base Stave Anchors used on all sizes of silos.
S-23 Base Stave Anchor.
Cable Clip.
1
4
5

No. 1 Cable is held to outer and inner top hoops by S25-26 Cable Clamp 1-A. Inner top hoop is united to outer top hoop every 30 inches by S9 U Bolt Clamp, which allows for shrinking and swelling of staves at top of silo.

No. 2 Cable is attached to center hoop 2-A from top of silo by S25-26, the U Bolt of which passes through stave and draws against a ⅝"x4" Stub opposite center hoop. End of cable is locked with Cable Clip, 1-B and 2-B.

No. 3 Cable Foundation Anchor Yoke, S24, is firmly embedded in concrete up to threaded line. Grooved head of S24 permits cable to be drawn taut which serves the purpose of a turnbuckle and eliminates the annoyance of binding or kinking; giving an easy and perfect adjustment to cable.

No. 4 Cable Base Anchor, S24, is embedded in concrete up to its threaded portion.

No. 5 Stave Base Anchor, S23, rests on face of foundation. The anchor bolt is embedded in concrete up to its threaded portion. S23 is bolted to stave with ¼ x2¾" Bolt, provided with a washer. Slotted opening in S23 permits silo base to contract and expand, an exclusive feature of the TECKTONIUS Silo.

Manufactured by us represent two distinct types of Silo Construction.

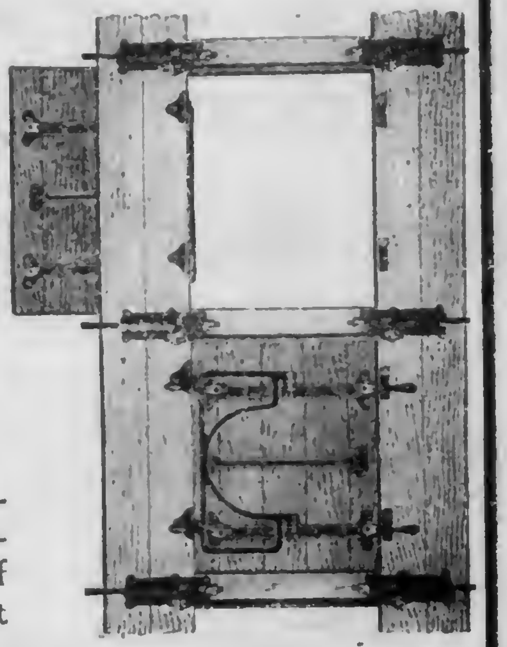
THE TECKTONIUS is the SILO SUPREME ---complete in detail, unexcelled in quality of material used.

THE DARBY is built on simpler lines and while substantial and effective, does not carry the detailed finish of the Tecktonius, consequently is considerably LESS in PRICE.

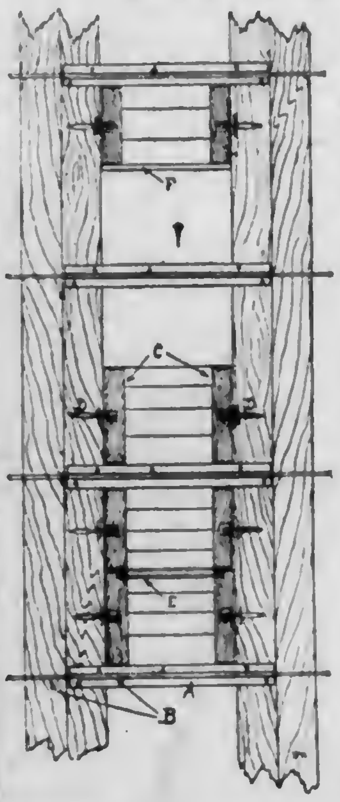
The fundamental principles of silo construction lie in the DOORWAY, DOORS and ANCHORAGE.

The cut opposite gives a detailed description of the Tecktonius Incomparable Anchorage System while the cut just below shows the DOOR FRONT and the SUSPENSION HINGE DOOR. The door that is always in place.

Automatic Hoop and Doorway Fasteners
Continuous Doorway
One Piece Staves



THE DARBY SILO



The silo with the DUPLEX DETACHABLE DOOR is the new SILO SENSATION. Carefully note points of construction of Doors and Door Front shown in opposite cut.

A. 3 inch x 4 inch Cross Piece
B. Hoop Imbedded into Crosspieces
C. Batten to Reinforce Door
D. Adjustable Friction Clutch Lock
E. Grabiron Step on Door
F. Shiplap Joint Between Doors

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